COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Piedmont Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Honeywell International, Inc.
P.O. Box 761
Hopewell, Virginia 23860
Permit No. PRO-50232

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Honeywell International, Inc. has applied for a Title V Operating Permit for its Hopewell, Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date:
Stanley Faggert
(804) 527-5078

Air Permit Manager: _____ Date:
James E. Kyle, P.E.

Regional Permit Manager: _____ Date:
James J. Golden

FACILITY INFORMATION

Permittee
Honeywell Nylon LLC – Hopewell Plant
Intersection of Routes 10 and 156
Hopewell, Virginia 23860

Responsible Official
Mr. J.R. Higbie
Plant Manager

Facility
Honeywell Nylon LLC – Hopewell Plant
Intersection of Routes 10 and 156
Hopewell, Virginia 23860

Contact Person
Mr. George Weber
Senior Environmental Engineer
804-541-5438

AIRS Identification Number: 51-670-0026

Facility Description: SIC Code 2869 – The Honeywell Nylon LLC Hopewell facility is located on a 450 acre site between Route 10 and the James River at the east end of Hopewell. The site employs approximately 700 people.

The Hopewell facility includes nine major chemical process areas, a powerhouse, and a marine terminal for transfer of fuel and bulk materials. Caprolactam is the primary product of the site and the majority of it is sold on the open market.

Co-products include ammonium sulfate, adipic acid, cyclohexanol, cyclohexanone and oxime chemicals. Major raw materials used at the site include phenol, natural gas for the production of ammonia and sulfur for the production of oleum.

COMPLIANCE STATUS

The facility reports that they are currently in compliance with all applicable requirements. This is confirmed by the latest inspection, dated December 5, 2003, where the facility was judged to be in compliance at the time of the inspection.

EMISSIONS INVENTORY:

A summary of Honeywell's most recent annual emissions is shown below.

PLANTWIDE EMISSIONS SUMMARY [TONS PER YEAR]	
CRITERIA POLLUTANTS	**2005 ACTUAL EMISSIONS**
Particulate Matter (PM10)	**356**
Nitrogen Oxides (NO2)	**7979**
Sulfur Dioxide (SO2)	**2081**
Carbon Monoxide (CO)	**292**
Volatile Organic Compounds (VOC)	**277**

The permitted capacity of the Honeywell facility is above the major source levels for all criteria pollutants and is subject to Title V permitting requirements.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Area 6							
A6-Hydro (APT-2,4, 6,81,82)	FU-1 or FLS-61/62	Area 6 Continuous Cyclohexanone Hydrogenation	17,053 Area 6 feed units/hr	Process heater combustion or non-assisted flare	FU-1 or FLS-61/62	VOC	August 9, 2006
CL-2	FLS-61/62	Cyclohexanone System Distillation	2,190 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	August 9, 2006
CL-9	FLS-61/62	APT-1 System Distillation	409 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	August 9, 2006
CL-10	VE-27	APT-1 System Distillation	321 Area 6 feed units/hr	N/A	N/A	N/A	August 9, 2006
CL-17	FLS-61/62	Cyclohexanol System Distillation	847 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	August 9, 2006
CL-18	FLS-61/62	Cyclohexanone System	2,920 Area 6 feed	Non-assisted flare	FLS-61/62	VOC	August 9, 2006

		Distillation	units/hr				
CL-25	C-190	Phenol System Distillation	7,300 Area 6 feed units/hr	N/A	N/A	N/A	August 9, 2006
CL-26	FLS-61/62	Cyclohexanone System Distillation	9,198 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	August 9, 2006
CL-36	C-434	Cyclohexanone System Distillation	5,840 Area 6 feed units/hr	Condenser	C-434	VOC	August 9, 2006
CL-46	C-249	Phenol System Distillation	17,520 Area 6 feed units/hr	N/A	N/A	N/A	August 9, 2006
CL-63	FLS-61/62	Cyclohexanol System Distillation	2,628 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	August 9, 2006
CL-64	C-330	Phenol System Distillation	2,920 Area 6 feed units/hr	Condenser	C-330	VOC	August 9, 2006
CL-65	CL-65RC	Cyclohexanone System Distillation	6,570 Area 6 feed units/hr	Condenser	CL-65RC	VOC	August 9, 2006
CL-65N	FLS-61/62	Cyclohexanone System Distillation	6,570 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	August 9, 2006
APT-66B APT-67B	C-225	Two Phenol Purification Vessels	18,396 Area 6 feed units/hr	Condenser	C-225	VOC	August 9, 2006
CT-48 CT-53 CT-55	FLS-61/62	Three Catalyst Centrifuges	11,096 Area 6 feed units/hr	Non-assisted flare	FLS-61/62	VOC	August 9, 2006
APT-1	FLS-61/62	Naxol Batch Reactor	3,504 Area 6 feed units/batch	Non-assisted flare	FLS-61/62	VOC	August 9, 2006
VA-15	VE-76ZC	CL-26 Catalyst Concentrator	292 Area 6 feed units/hr	N/A	N/A	N/A	August 9, 2006
VA-17	VE-107ZC	CL-36 Catalyst Concentrator	146 Area 6 feed units/hr	N/A	N/A	N/A	August 9, 2006
VT-005	VT-005	Area 6 Storage Tank	4,876 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	August 9, 2006
VT-007	C-437	Area 6 Storage Tank	10,230 Area 6 storage units	Condenser	C-437	VOC	August 9, 2006
VT-010	VT-010	Area 6 Storage Tank	1,535 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	August 9, 2006
VT-029	VT-029	Area 6 Storage Tank	16,027 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	August 9, 2006
HT-026	HT-026	Area 6 Storage Tank	6,360 Area 6	Submerged Fill Pipe	N/A	VOC	August 9, 2006

			storage units				
VT-462	VT-462	Phenol Storage Tank	349,184 Area 6 storage units	N/A	N/A	N/A	August 9, 2006
VT-515	VT-515	Phenol Storage Tank	349,184 Area 6 storage units	N/A	N/A	N/A	August 9, 2006
HT-242		Area 6 Storage Tank	3,274 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	August 9, 2006
HT-27		Area 6 Storage Tank		Submerged Fill Pipe	N/A	VOC	August 9, 2006
VT-05		Area 6 Storage Tank		Submerged Fill Pipe	N/A	VOC	August 9, 2006
VT-210		Area 6 Storage Tank	4,007 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	August 9, 2006
VT-211		Area 6 Storage Tank	4,007 Area 6 storage units	Submerged Fill Pipe	N/A	VOC	August 9, 2006
APT-17		Area 6 Storage Tank	1,535 Area 6 storage units	Level Control	N/A	VOC	August 9, 2006
VT-183		Area 6 Storage Tank		Level Control	N/A	VOC	August 9, 2006
VT-184		Area 6 Storage Tank		Level Control	N/A	VOC	August 9, 2006
HT-09		Area 6 Storage Tank	205 Area 6 storage units				August 9, 2006
HT-38		Area 6 Storage Tank	119 Area 6 storage units				August 9, 2006
HT-45		Area 6 Storage Tank	597 Area 6 storage units				August 9, 2006
VT-119		Area 6 Storage Tank	324 Area 6 storage units				August 9, 2006
VT-021		Area 6 Storage Tank	648 Area 6 storage units				August 9, 2006
VT-250		Area 6 Storage Tank	1,961 Area 6 storage units				August 9, 2006
VT-456		Area 6 Storage Tank	281 Area 6 storage units				August 9, 2006
VT-176		Area 6 Storage Tank	49,104 Area 6 storage units				August 9, 2006
VT-188		Area 6 Storage Tank	49,104 Area 6 storage units				August 9, 2006

RC-Nadone	RC-Nad	Nadone Rail Car Loading Rack	2,940 Area 6 loading units/hr	Vapor Recovery System	VT-205	VOC	August 9, 2006
TT-Nadone	TT-Nad	Nadone Tanker Truck Loading Rack	632 Area 6 loading units/hr	N/A	N/A	N/A	August 9, 2006
TT-Naxol	TT-Nax	Naxol Tanker Truck Loading Rack	368 Area 6 loading units/hr	N/A	N/A	N/A	August 9, 2006
Drum Naxol	DR-Nax	Naxol Drum Loading Rack	211 Area 6 loading units/hr	N/A	N/A	N/A	August 9, 2006
Drum Nadone	DR-Nad	Nadone Drum Loading Rack	211 Area 6 loading units/hr	N/A	N/A	N/A	August 9, 2006
TT Catalyst	TT-Cat	Hydrogenation Catalyst Tanker Truck Loading Rack	613 Area 6 loading units/hr	N/A	N/A	N/A	August 9, 2006
Area 9							
TW-2	TW-2	A-Train Ammonium Nitrite (Nitrite) Tower	2,891 Area 9 production units/hr	N/A	N/A	N/A	August 9, 2006
TW-8	TW-8	B-Train Nitrite Tower	2,891 Area 9 production units/hr	Venturi Scrubber	SE-179	TSP	August 9, 2006
TW-17	TW-17	C-Train Nitrite Tower	2,891 Area 9 production units/hr	N/A	N/A	N/A	August 9, 2006
TW-22	TW-22	D-Train Nitrite Tower	3,154 Area 9 production units/hr	NOx Oxidizer Tank Venturi Scrubber	VT-883 SE-65	NOx PM	August 9, 2006
TW-32	TW-32	E-Train Nitrite Tower	3,154 Area 9 production units/hr	NOx Oxidizer Tank Venturi Scrubber	VT-847 SE-116	NOx PM	August 9, 2006
TW-62	TW-62	A-Train Hydroxylamine Diammonium Sulfonate (Disulfonate) Tower	17,107 Area 9 production units/hr	Packed Bed Scrubber Mist Eliminator	SE-45 SE-88	SO2 PM	August 9, 2006
TW-9	TW-9	B-Train Disulfonate Tower	17,107 Area 9 production units/hr	Packed Bed Scrubber Mist Eliminator	SE-87 SE-89	SO2 PM	August 9, 2006
TW-18	TW-18	C-Train Disulfonate Tower	17,107 Area 9 production units/hr	Packed Bed Scrubber Mist Eliminator	SE-19 SE-90	SO2 PM	August 9, 2006
TW-23	TW-23	D-Train Disulfonate Tower	18,252 Area 9 production units/hr	Packed Bed Scrubber Mist Eliminator	SE-32 SE-91	NOx, SO2 PM	August 9, 2006

TW-33	TW-33	E-Train Disulfonate Tower	18,252 Area 9 production units/hr	Packed Bed Scrubber Mist Eliminator	SE-54 SE-101	NOx, SO2 PM	August 9, 2006
Area 9 CT	Area 9 CT	Ten (10) Area 9 Cooling Towers	15,184 Area 9 cooling units/min total	N/A	N/A	N/A	August 9, 2006
Area 8							
A8Rea	VT-664	A8 Rearrangement Reactor system (VT-867, VT-404A, APT-8, APT-32, APT-16, SP-681, VT-96, VT-226, VT-664)	48,415 Area 8 production units/hr	N/A	N/A	N/A	August 9, 2006
A8Tur	C-345	A8 Turbogizer System (APT-128, VT-141, VT-243, VT-244, VT-817)	48,415 Area 8 production units/hr	N/A	N/A	N/A	August 9, 2006
A8Tur-Sep	C-345	A8 Turbogizer Separation System (APT-14, APT-26, VT-59, HT-66)	48,415 Area 8 production units/hr	N/A	N/A	N/A	August 9, 2006
APT-30	APT-30	Spare Oxime Hold Tank	25,260 Area 8 production units/hr	N/A	N/A	N/A	August 9, 2006
TW-20	TW-20	Cyclohexanone/sulfate Stripping Column	314,335 Area 8 production units/hr				August 9, 2006
LacSep	A16Thermox	Lactam/Sulfate/Emulsion Separation (APT-9, APT-10, HT-58, HT-74, HT-99, VT-246)	296,754 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
C-14, 45; SE-125	A16Thermox	Caprolactam Extraction and Separation	218,095 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
CL-15	A16Thermox	Toluene/Sulfate Stripping Column	184,903 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
CL-15new	A16Thermox	Toluene/Sulfate Stripping Column	184,903 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006

CL-28, 29	A16Thermox	Toluizer Head Tanks	296,754 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
CL-29new	A16Thermox	Toluizer Head Tank	296,754 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
CL-62	A16Thermox	Toluene/Lactam Distillation Column	111,851 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
CL-62new	A16Thermox	Toluene/Lactam Distillation Column	111,851 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	Same as TYE16	VOC	August 9, 2006
HT-53	A16Thermox	Toluene/Water Separator	40,416 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
VT-227	A16Thermox	Toluene Recovery Flash Tank	10,609 Area 8 production units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
VT-402, 668	VT-402	Lamella Separator	85,707 Area 8 production units/hr	N/A	N/A	N/A	August 9, 2006
A8-FL1, FL2	TYS02	Two A8 Caprolactam Flakers	6,947 Area 8 production units/hr each	Scrubber	SC-61, SC-new	PM/VOC	August 9, 2006
CCM	FN-174, 175	Cobalt Catalyst Manufacturing	632 Area 8 production units/hr	Baghouse	FN-182	PM	August 9, 2006
C-361	A16Thermox			Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
SolLdg	A16Thermox	A8 Solvent Purge Loadout	192 Area 8 storage units/hr	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
Area 8 Cooling Towers	Area 8 Cooling Towers	Modular Cooling Towers	2,740 Area 8 cooling units/min	N/A	N/A	N/A	August 9, 2006
VT-221	A16Thermox	Area 8/16 Organic Liquid Storage Tank	752 Area 8 storage units	Hydrocarbon Vapor Combustion Unit	A16Thermox	VOC	August 9, 2006
Misc. Storage Tanks	Misc. Storage Tanks	Nine (9) miscellaneous A8/16 organic liquid storage tanks	24,064 Area 8 storage units max. capacity	N/A	N/A	N/A	August 9, 2006
Area 7							
A7Pur	C-323	Caprolactam Distillation and Crystallization	3,035 Area 7 production units/hr	N/A	N/A	N/A	August 9, 2006
C-323	C-323	Area 7 Barometric Condenser	31.5 Area 7 air	N/A	N/A	N/A	August 9, 2006

			units				
A7Fil	FS-1 FS-2	Caprolactam Belt Filtration and Crystallization/Storage	3,035 Area 7 production units/hr	Fabric filter (x2)	FS-1; FS-2	Particulate	August 9, 2006
CL-70	C-323	Area 7 Caprolactam Product Distillation Column	1,054 Area 7 production units/hr	N/A	N/A	N/A	August 9, 2006
CL-22	C-84	Purge Tower	136 Area 7 production units/hr	N/A	N/A	N/A	August 9, 2006
CL-39	C-181	Purge Tower	136 Area 7 production units/hr	N/A	N/A	N/A	August 9, 2006
Depoly	Depoly	Depoly Conveyor	850 Area 7 production units/hr	N/A	N/A	N/A	August 9, 2006
CL-7new	CL-7new	Caprolactam Product Distillation Column	3,060 Area 7 production units/hr	N/A	N/A	N/A	August 9, 2006
VT-394	VT-394	Washwater/wastewater concentrator	153 Area 7 production units/hr	N/A	N/A	N/A	August 9, 2006
VT-799	VT-799						August 9, 2006
VE-14/36	C-323	A-Train Crystallizer Jet Systems	6.3 Area 7 air units	N/A	N/A	N/A	August 9, 2006
APT-22, 23, 24, 25	APT-24	Crystallization/Purification Systems		N/A	N/A	N/A	August 9, 2006
CL-21	CL-21	Caprolactam Purification Column	3,485 Area 7 production units/hr	N/A	N/A	N/A	August 9, 2006
CL-12	CL-12	Washwater/wastewater concentrator	340 Area 7 production units/hr	N/A	N/A	N/A	August 9, 2006
Misc. Storage Tanks	Misc. Storage Tanks	Thirty-One (31) Miscellaneous Area 7 Organic Liquid Storage Tanks	85,000 Area 7 storage units max. capacity	N/A	N/A	N/A	August 9, 2006
A7Ldg	A7Ldg	Area 7 Loading Rack	43 Area 7 loading units/hr	N/A	N/A	N/A	August 9, 2006
A7W/W	A7W/W	Area 7 Washwater/Wastewater Loading Rack	5,406 Area 7 loading units/hr	N/A	N/A	N/A	August 9, 2006
Remelt	SC-61	Caprolactam Remelt facility	442 Area 7 production units/hr	Scrubber	SC-61	PM/VOC	August 9, 2006

Area 11							
RD-3	DC-7	Ammonium Sulfate Dryer	1.4 Area 11 production units per hour	Scrubber	DC-7	PM/VOC	August 9, 2006
RD-4	DC-11	Ammonium Sulfate Dryer	1.9 Area 11 production units per hour	Scrubber	DC-11	PM/VOC	August 9, 2006
RD-6	DC-12	Ammonium Sulfate Dryer	1.4 Area 11 production units per hour	Scrubber	DC-12	PM/VOC	August 9, 2006
RD-7	DC-29	Ammonium Sulfate Dryer	1.4 Area 11 production units per hour	Scrubber	DC-29	PM/VOC	August 9, 2006
A11-Crys	A11-Crys	Ammonium Sulfate Crystallizers	5.4 Area 11 production units per hour	N/A	N/A	N/A	August 9, 2006
A11 Cooling Towers	A11 Cooling Towers	A11 Modular Cooling Towers	20 Area 11 cooling units/min	N/A	N/A	N/A	August 9, 2006
A11CT	DC-25	Ammonium Sulfate Centrifuges	5.4 Area 11 production units per hour	Scrubber	DC-25	PM/VOC	August 9, 2006
VT-873	VT-873	Ammonium Sulfate Coating	6,615 Area 11 storage units/hr	N/A	N/A	N/A	August 9, 2006
VT-796	VT-896	Ammonium Sulfate Coating	18,585 Area 11 storage units/hr	N/A	N/A	N/A	August 9, 2006
B12	DC-21	Building 12 Ammonium Sulfate Storage and Loading Operation	5.4 Area 11 production units per hour	Scrubber	DC-21	PM/VOC	August 9, 2006
B12	DC-31	Building 12 Ammonium Sulfate (AS) Storage and Loading Operation	5.4 Area 11 production units per hour	Fabric Filter	DC-31	PM/PM10	August 9, 2006
SC-65, 66, 67	DC-21	Three (3) Triple Deck Screens	3.2 Area 11 production units per hour each	Scrubber	DC-21	PM/PM10	August 9, 2006
CO-225	DC-21	AS Mid-Grade Conveyor	3.2 Area 11	Scrubber	DC-21	PM/PM10	August 9, 2006

			production units per hour				
BN-11	DC-31	AS Bulk Storage Bin/Loading Station	16.8 Area 11 production units per hour	Fabric Filter	DC-31	PM/PM10	August 9, 2006
CO-226	DC-31	AS Bulk Storage Bin Conveyor	3.2 Area 11 production units per hour	Fabric Filter	DC-31	PM/PM10	August 9, 2006
EL-25	DC-31	AS Bulk Storage Bin Elevator	3.2 Area 11 production units per hour	Fabric Filter	DC-31	PM/PM10	August 9, 2006
B12Fug	Fugitive (Fug)	AS Railcar/Ship/Barge Product Loading Operation	16.8 Area 11 production units per hour	Dustrol anti-caking agent	N/A	PM/PM10	August 9, 2006
B12Fug	Fug	AS Truck Product Loading Operation	16.8 Area 11 production units per hour	Dustrol anti-caking agent	N/A	PM/PM10	August 9, 2006
B12Fug	Fug	Outdoor Storage Pad Loading Operation	16.8 Area 11 production units per hour	Dustrol anti-caking agent	N/A	PM/PM10	August 9, 2006
Area 13							
CL-4		One (1) Nitric Acid Adsorption Column	54 Area 13 production units/hr	N/A	N/A	N/A	August 9, 2006
VT-845 VT-846		Two (2) AA Reactor vessels	54 Area 13 production units/hr combined	N/A	N/A	N/A	August 9, 2006
CL-5	VE-004	One (1) Nitric Acid Concentration Column	54 Area 13 production units/hr	N/A	N/A	N/A	August 9, 2006
D-52	FN-168	One (1) AA Rotary Dryer	54 Area 13 production units/hr	Cyclone in series with a Venturi Scrubber	DC-32 DC-28	PM/PM10	August 9, 2006
C-391	FN-211	AA Cooler	54 Area 13 production units/hr	Fabric Filter	BH-5	PM/PM10	August 9, 2006
BN-1	FN-168	One (1) AA Storage Bin	54 Area 13 production units/hr	Venturi Scrubber	DC-27	PM/PM10	August 9, 2006
BN-3	FN-168	One (1) AA Storage Bin	54 Area 13	Cyclone in series with	DC-32	PM/PM10	August 9, 2006

			production units/hr	a Venturi Scrubber	DC-28		
BN-7	FNBH-4	One (1) AA Storage Bin	54 Area 13 production units/hr	Fabric Filter	BH-4	PM/PM10	August 9, 2006
CT-13 CT-30 CT-31	CT-13 CT-30 CT-31	Three (3) AA Centrifuges	54 Area 13 production units/hr combined	N/A	N/A	N/A	August 9, 2006
EV-3 EV-4 EV-7	VE-013A	Three (3) AA Crystallizers	54 Area 13 production units/hr combined	N/A	N/A	N/A	August 9, 2006
AA Bleed	VE-16	AA Bleed System: AA Bleed Evaporator VT-70 AA Bleed Crystallizer VT-79 AA Bleed Centrifuge CT-15	54 Area 13 production units/hr combined	N/A	N/A	N/A	August 9, 2006
A13 Storage		Miscellaneous A13 Storage Tanks	11,547 Area 13 storage units/hr	N/A	N/A	N/A	August 9, 2006
AA WH	FN-179	AA Warehouse	54 Area 13 production units/hr	Venturi Scrubber	DC-28	PM/PM10	August 9, 2006
AA Truck Loading		AA Bulk Truck Loading	54 Area 13 production units/hr	N/A	N/A	N/A	August 9, 2006
Area 14							
VT-853	VT-853	MEKO primary reactor	8400 Area 14 production units/hr	N/A	N/A	N/A	March 9, 2006
APT-136	VT-853	MEKO secondary reactor	8400 Area 14 production units/hr	N/A	N/A	N/A	March 9, 2006
VT-215/217	TW-74	Two (2) MEK Storage Tanks	6088 Area 14 storage units each	Koch Packed Tower Absorber	TW-74	VOC	March 9, 2006
CL-16	C-111	Ammonium Sulfate Stripping Column	806 Area 14 production units/hr	N/A	N/A	N/A	March 9, 2006
CL-23	TW-74	MEKO Lites Distillation Column	420 Area 14 production units/hr	Koch Packed Tower Absorber	TW-74	VOC	March 9, 2006
CL-24	TW-74	MEKO Product Distillation Column	386 Area 14 production units/hr	Koch Packed Tower Absorber	TW-74	VOC	March 9, 2006
HT-55		MEKO/Sulfate Phase Separator	2,034 Area 14 storage units	N/A	N/A	N/A	March 9, 2006

SE-170		MEKO/Water Phase Separator	145 Area 14 storage units	N/A	N/A	N/A	March 9, 2006
Misc A14 Storage Tanks		Eight (8) Miscellaneous A14 Storage Tanks	16,021 Area 14 storage units total	N/A	N/A	N/A	March 9, 2006
Honeywell Chemicals Area							
MEKO-1		Honeywell Chemicals MEKO Production Unit; including	580 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	TW-75	One (1) MEKO Lites Distillation Column	580 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	TW-76	One (1) MEKO Product Distillation Column	580 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	VT-851; 852	Two MEKO Product Storage Tanks	7.5 Honeywell Chemicals storage units each	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	HT-258	One (1) MEKO Product Tower Reflux Tank	0.6 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	CL-66	MEKO Recovery Column	580 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
ADO-1		Honeywell Chemicals ADO Production Unit	209 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	SU-8	Process Sump	209 Honeywell Chemicals production units/hr	N/A	N/A	N/A	March 9, 2006
OX-1		Honeywell Chemicals Multi-Purpose Oximes Production	348 Honeywell Chemicals	Thermal Oxidizer	FU-14	VOC	March 9, 2006

		Unit; including	production units/hr				
	VT-614	One (1) Aqueous Ammonium Sulfate Stripping Column	3 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	APT-117	One (1) 2nd Stage AAO Oximator	3.3 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	CL-54	One (1) AAO/MIBKO lites distillation column	3480 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	CL-55	One (1) AAO/MIBKO lites distillation column	138 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	CL-56	One (1) AAO/MIBKO lites distillation column	138 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	SE301 SE302	Two (2) Phase Separators	45 Honeywell Chemicals production units/hr each	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	C516 C517	Two (2) Vacuum Systems with After-Condensers	45 Honeywell Chemicals production units/hr each	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	HT187	One (1) AAO/MIBKO Storage Tank	102 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	VT953	One (1) Seal Pot	45 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	HA112	One (1) Aqueous Ammonium Sulfate Reflux Drum	0.1 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	HA113	One (1) Aqueous Ammonium Sulfate Product Drum	0.1 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006

	VT615	One (1) CL-54 O/H Receiver Tank	1.5 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	VT617 VT618	Two (2) AAO Product Hold Tanks	7.5 Honeywell Chemicals storage units each	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	HT-New	One (1) Process Tank	33 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	VT856	One (1) ??? Storage Tank	0.2 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
HAS-1		Honeywell Chemicals HAS Production Unit; including	209 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	APT-119	One (1) HAS Crystallizer Cooler Tank	4.5 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	APT-120	One (1) HAS Crystallizer	9 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	APT-126	One (1) HAS Mother Liquor Recycle Tank	1.5 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	HT-240	One (1) HAS Mixer Loop Tank	1.5 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	SE-130	One (1) Phase Separator	0.8 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	TW-70	One (1) HAS Transoximation Tower	209 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	VT-621	One (1) HAS Mother Liquor Storage Tank	3 Honeywell Chemicals	Thermal Oxidizer	FU-14	VOC	March 9, 2006

			storage units				
OS-1		Honeywell Chemicals OS-1000 Production Unit; including:	116 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	TW-72	One (1) Vent Scrubber	162 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	TW-73	One (1) Hexane Stripping Column	116 Honeywell Chemicals production units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	F-169	One (1) Ammonia Chloride Filter	0.5 Honeywell Chemicals storage units/hr	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	VT824	One (1) Reactor Feed Tank	8 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	VT830	One (1) Hexane Storage Tank	17 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
	HT186	One (1) Storage Tank		Thermal Oxidizer	FU-14	VOC	March 9, 2006
	HT189	One (1) Storage Tank		Thermal Oxidizer	FU-14	VOC	March 9, 2006
	HT253	One (1) MTCS Storage Tank	20 Honeywell Chemicals storage units	Thermal Oxidizer	FU-14	VOC	March 9, 2006
Hazardous Waste Combustor (HWC)	FU-14	One (1) Trane Thermal Incinerator	40.5 Honeywell chemicals burner units/hr	Adiabatic Quench Tower; Caustic Scrubber; Cloud Chamber Wet Scrubber System	TW-64; TW-48; TW-95,96	PM/HCL PM/HCL PM	March 9, 2006
Sulfuric Acid Plant (SAP)							
SAP	SK-1	Sulfuric Acid Plant	5.1 sulfuric acid production units/hr	Sulfite Scrubber Mist Eliminator	TW-38 SE-105	SO2 PM	August 9, 2006

Kellogg/Girdler Ammonia/Synthetic Gas (Syngas) Plants							
FU-1	FU-1	Kellogg Primary Reformer and Auxiliary Boiler	9.1 syngas heat input units/hr	Low Pressure Purge	GC-11	NOx	August 9, 2006
FU-5	FU-5	Ammonia Converter Start-up Heater	0.3 syngas heat input units/hr	N/A	N/A	N/A	August 9, 2006
FU-6	FU-6	Girdler Primary Reformer	0.6 syngas heat input units/hr	N/A	N/A	N/A	August 9, 2006
VT-418	VT-418	CO2 Stippers	184,800 lb/hr	N/A	N/A	N/A	August 9, 2006
CD-1	CD-1	Kellogg Desulfurization Drum	746 Kellogg desulfurization units/hr	N/A	N/A	N/A	August 9, 2006
CD-3 CD-4	CD-4	Girdler Desulfurization Drums	10,514 Girdler desulfurization units/hr	N/A	N/A	N/A	August 9, 2006
CLT-1	CLT-1	Kellogg Primary Reformer Cooling Tower	9,306 syngas cooling units/min	N/A	N/A	N/A	August 9, 2006
Kel SCT	Kel SCT	Kellogg Supplemental Cooling Tower	2,376 syngas cooling units/min	N/A	N/A	N/A	August 9, 2006
VT-407 VT-426 VT-427	Sar#	Kellogg Storage Vessels	5,103 syngas storage units	N/A	N/A	N/A	August 9, 2006
VT-882 HT-214	Sar#	Two (2) Kellogg Condensate Collection Vents		N/A	N/A	N/A	August 9, 2006
Powerhouse Boilers							
B-8	S-102	Powerhouse Boiler #8; natural gas, #6 oil and Area 6 Co-Product fired	1.1 Powerhouse heat input units/hr	N/A	N/A	N/A	May 31, 2004

Note: Sar# = Same as Reference Number

EMISSION UNIT APPLICABILE REQUIREMENTS:

The source has emission unit specific applicable requirements for the each of their production areas: Area 6 – cyclohexanone production, Area 9 – hydroxylamine sulfate production, Area 8/16 – crude caprolactam production, Area 7 – purified caprolactam production, Area 11 – ammonium sulfate production, Area 13 - adipic acid production, Area 14 – methyl ethyl ketoxime production, the Kellogg plant – ammonia production, the SAP plant – sulfuric acid production, the Girdler plant – syngas production, the Honeywell Chemicals Plant – specialty chemicals production, and the Powerhouse – steam production. The sources of applicable requirements for the various areas are as follows:

Area 6 –The August 9, 2006 minor new source review permit; the March 26, 1997 RACT Agreement; the Chapter 40 Existing Source Standard for Storage Tanks from Virginia's regulations (Rule 4-25); New Source Performance Standards NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations) and RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes); and 40 CFR 63 Subparts A, F, G and H (National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater). The primary regulated pollutants emitted by Area 6 are VOC and HAP.

Area 9 –The August 9, 2006 minor new source review permit and Appendix A of the August 26, 2002 Consent Order. The primary regulated pollutants emitted by Area 6 are NOx, SO2, PM and PM-10.

Area 8/16 –The August 9, 2006 minor new source review permit; the July 16, 1979 minor new source review permit; the March 26, 1997 RACT Agreement; the Chapter 40 Existing Source Standard for Storage Tanks from Virginia's regulations (Rule 4-25); New Source Performance Standards RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes); the new/modified source opacity standard of 9 VAC 5-50-80. The primary regulated pollutant emitted by Area 8/16 is VOC.

Area 7 –The August 9, 2006 minor new source review permit and New Source Performance Standards NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations); the new/modified source opacity standard of 9 VAC 5-50-80. The primary regulated pollutants emitted by Area 7 are PM, PM-10 and VOC.

Area 11 –The August 9, 2006 minor new source review permit and New Source Performance Standards PP (Standards of Performance for Ammonia Sulfate Manufacture); the new/modified source opacity standard of 9 VAC 5-50-80. The primary regulated pollutants emitted by Area 11 are PM, PM-10 and VOC.

Area 13 –The August 9, 2006 minor new source review permit and New Source Performance Standards NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations) and RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes). The primary regulated pollutants emitted by Area 13 are PM and PM-10.

Sulfuric Acid Plant (SAP) – The August 9, 2006 minor new source review permit and New Source Performance Standard H (Standards of Performance for Sulfuric Acid Plants). The primary regulated pollutants emitted by the SAP are SO2 and sulfuric acid mist.

Kellogg Ammonia Plant – The August 9, 2006 minor new source review permit; the new/modified source opacity standard of 9 VAC 5-50-80. The primary regulated pollutant emitted by the Kellogg Plant is NOx.

Girdler Syngas Plant – The August 9, 2006 minor new source review permit; the March 26, 1997 RACT Agreement; the new/modified source opacity standard of 9 VAC 5-50-80. The primary regulated pollutant emitted by the Girdler Plant is NOx.

Powerhouse Boilers – The May 31, 2004 NOx Budget permit and the Chapter 40 Existing Source Standards for Fuel Burning Equipment (Rule 4-8). The primary regulated pollutants emitted by the powerhouse boilers are PM, PM-10, NOx and SO2.

Area 14 and the Honeywell Chemicals process area (HCA) – The March 9, 2006 minor new source review permit, the March 26, 1997 RACT Agreement, the Chapter 40 Existing Source Standard for Storage Tanks from Virginia's regulations (Rule 4-25), and 40 CFR 63 Subparts A and EEE (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors). The primary regulated pollutants emitted by the Area 14 and the HCA are VOC, HAP, NOx and SO2.

In addition, certain requirements that from the August 9, 2006 minor NSR permit that apply on a plant-wide basis were included in a separate "Facility-Wide Requirements" section. Since they do not apply to a specific operational division of the facility, the requirements of 40 CFR 61 Subpart FF (Benzene NESHAP) were included in the Facility-Wide section as well.

A. Area 6 Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

1. Volatile Organic Compound emissions from the Cyclohexanone Continuous Hydrogenation reactor system (Ref. No. Area 6-Hydro) of the Cyclohexanone Production Area (Ref. No. Area 6) shall be controlled by venting these emissions to the M. W. Kellogg Ammonia Production Plant (Ref. No. Kellogg) for incineration. The emissions vented to the Kellogg facility shall include any emissions bypassing the Cryogenics facility and all emissions entering the Cryogenics facility except for emissions resulting from depressurizing the Cryogenics carbon beds. The TOC reduction efficiency of the Kellogg facility as an incinerator shall be at least 98%.
   (Condition #21 of the 8/9/2006 New Source Review (NSR) Permit and 9 VAC 5-80-110 of State Regulations)

2. Volatile Organic Compound emissions resulting from the depressurizing the carbon beds (Ref. Nos. F-119, F-120) of the Cyclohexanone Production Area (Ref. No. Area 6), the venting of Cyclohexanone Continuous Hydrogenation during Cryogenic outages (Ref. No. Area 6-Hydro) of the Cyclohexanone Production Area (Ref. No. Area 6), and the Cyclohexanol Batch Reactor (Ref. No. APT-1) of the Cyclohexanone Production Area (Ref. No. Area 6) shall be controlled by a non-assisted flare (Ref. No. FLS-61). The reduction efficiency of the flare shall be at least 98%.
   (Condition #22 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

3. Volatile Organic Compound emissions from the Cyclohexanone Continuous Hydrogenation Centrifuges (Ref. Nos. CT-48, CT-53, and CT-55), the Cyclohexanol Distillation Column (Ref. No. CI-9), the Cyclohexanone Distillation Columns (Ref. Nos. CI-2 and CI-18) product recovery condenser (Ref. No. VE-02ZC), the Cyclohexanol Distillation Column (Ref. No. CI-17) product recovery condenser (Ref. No. VE-53ZC), the Crude Cyclohexanone Distillation Column (Ref. No. CI-26) product recovery condenser (Ref. No. VE-11ZC), the Crude Cyclohexanone Distillation Column (Ref. No. CI-63), and the new Cyclohexanone Distillation Column (Ref. No. CI-65new) of the Cyclohexanone Production Area (Ref. No. Area 6) shall be controlled by a non-assisted flare (Ref. No. FLS-62). The reduction efficiency of the flare shall be at least 98%.
   (Condition #23 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

4. Volatile Organic Compound emissions from the Cyclohexanone/Cyclohexanol Storage Tank (Ref. No. VT-005) shall be controlled by installation of a submerged fill pipe. Volatile Organic Compound emissions from the Nadone railroad car loading positions (Ref. No. RC-Nadone) shall be controlled by a vapor recovery system directed to VT-205.
(Condition #24 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

5. Volatile Organic Compound emissions from the Cyclohexanone Distillation Column (Ref. No. CI-26) of the Cyclohexanone Production Area (Ref. No. Area 6) shall be controlled by the existing product recovery condenser (Ref. No. CL-26RC). The removal efficiency of the condenser shall be at least 70%. The permittee shall operate and maintain the condenser at or below the daily average outlet temperature that ensures continuous compliance with the requirements of this condition.
(Conditions #26 and #61 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

6. Volatile Organic Compound emissions from the Cyclohexanone Distillation Column (Ref. No. CI-36) of the Cyclohexanone Production Area (Ref. No. Area 6) shall be controlled by the existing product recovery condenser (Ref. No. CI-36RC). The removal efficiency of the condenser shall be at least 70%. The permittee shall operate and maintain the condenser at or below the daily average outlet temperature that ensures continuous compliance with the requirements of this condition and the emission limit contained in Condition #26.
(Conditions #27 and #62 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

7. Volatile Organic Compound emissions from the Cyclohexanone Distillation Column (Ref. No. CI-64) of the Cyclohexanone Production Area (Ref. No. Area 6) shall be controlled by a product recovery condenser (Ref. No. C-330). The removal efficiency of the condenser shall be at least 70%. The permittee shall operate and maintain the condenser at or below the daily average outlet temperature that ensures continuous compliance with the requirements of this condition and the emission limit contained in Condition #27.
(Conditions #28 and #60 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

8. Volatile Organic Compound emissions from the Cyclohexanone Distillation Column (Ref. No. CI-65) of the Cyclohexanone Production Area (Ref. No. Area 6) shall be controlled by a product recovery condenser (Ref. No. CI-65RC). The removal efficiency of the condenser shall be at least 70%. The permittee shall operate and maintain the condenser at or below the daily average outlet temperature that ensures continuous compliance with the requirements of this condition and the emission limit contained in Condition #28.
(Conditions #29 and #63 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

9. Volatile Organic Compound emissions from the Phenol Purification Reactors, APT-66B and APT-67B shall be controlled by a product recovery condenser (Ref. No. C-225). The permittee shall operate and maintain the condenser at or below a daily average outlet temperature of 150 °F.
(Conditions #29 and #63 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

10. Fugitive VOC emissions resulting from equipment leaks in those portions of Area 6 not already subject to fugitive emissions requirements from other applicable regulations shall be controlled through a Leak Detection and Repair (LDAR) program. The LDAR program shall be substantively equivalent to the LDAR requirements specified in 40 CFR 60, Subpart VV.
(Condition #E.7 of the 3/26/1997 RACT Agreement and 9 VAC 5-80-110 of State Regulations)

11. VOC emissions from storage tanks HT-242, HT-27, VT-05, VT-10, VT-29, VT-210, VT-211 and any railcars or tanker trucks used for the storage of Area 6 organics shall be controlled by a control method that will remove, destroy or prevent the discharge into the atmosphere of at least 60% by weight of VOC

emissions during the filling of such tank. The use of a submerged fill pipe or bottom filling shall be considered acceptable achievement of this standard.
(9 VAC 5-80-110, 9 VAC 5-40-3430 A and 9 VAC 5-40-3440 A)

12. VOC emissions from storage tanks APT-17, VT-183 and VT-184 shall be controlled by a control method that will remove, destroy or prevent the discharge into the atmosphere of at least 60% by weight of VOC emissions during the filling of such tank. The use of a level control system shall be considered acceptable achievement of this standard.
(9 VAC 5-80-110, 9 VAC 5-40-3430 A and 9 VAC 5-40-3440 A)

Throughput Limits

13. The annual input of phenol to Area 6 Cyclohexanone Production shall not exceed 3,292,000 Area 6 phenol units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #30 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

14. The annual input of crude cyclohexanone to the Cyclohexanone distillation column (Ref. No. CI-2) shall not exceed 48,512,880 Area 6 cyclohexanone units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #31 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

15. The annual input of crude cyclohexanol to the Cyclohexanol distillation column (Ref. No. CI-9) shall not exceed 4,774,000 Area 6 cyclohexanol units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #32 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

16. The annual input of crude cyclohexanol to the Cyclohexanol distillation column (Ref. No. CI-17) shall not exceed 10,503,240 Area 6 cyclohexanol units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #33 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

17. The annual input of crude cyclohexanone to the Cyclohexanone distillation column (Ref. No. CI-18) shall not exceed 67,171,680 Area 6 cyclohexanone units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #34 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

18. The annual input of crude cyclohexanone to the Cyclohexanone distillation column (Ref. No. CI-26) shall not exceed 277,872,984 Area 6 cyclohexanone units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #35 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

19. The annual input of Crude Cyclohexanone to the Cyclohexanone distillation column (Ref. No. CI-36) in Area 6 Cyclohexanone Production shall not exceed 167,929,200 Area 6 cyclohexanone units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #36 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

20. The annual input of Crude Cyclohexanone to CI-63 in Area 6 Cyclohexanone Production shall not exceed 65,305,800 Area 6 cyclohexanone units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #37 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

21. The annual input of Purified Phenol to CI-64 in Area 6 Cyclohexanone Production shall not exceed 733,760 Area 6 phenol units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #38 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

22. The annual input of Crude Cyclohexanone to CI-65 in Area 6 Cyclohexanone Production shall not exceed 167,929,200 Area 6 cyclohexanone units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #39 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

23. The annual input of Crude Cyclohexanone to CI-65new in Area 6 Cyclohexanone Production shall not exceed 167,929,200 Area 6 cyclohexanone units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #40 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

24. Total Sales Cyclohexanone (Ref. description Nadone) loaded to railcars or tank trucks shall not exceed 14,934,434 Area 6 loading units per year calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #41 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limits

25. Emissions from the operation of Area 6, the Cyclohexanone Production Area shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	150.0 lbs/hr	66 tons/yr

(Condition #43 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

26. Emissions from the product recovery condenser (Ref. No. VE-56ZC) from the operation of the Crude Cyclohexanone Distillation Column, CI-36 shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	3096 lbs every 30 days*	1.5 tons/yr

*The short term limits shall be determined on a 30 day basis calculated daily.
(Condition #44 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

27. Emissions from the operation of the Purified Phenol Distillation Column, CI-64 (Ref. No. VE-108ZC), in Area 6, the Cyclohexanone Production Area shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	720 lbs every 30 days*	1.1 tons/yr

*The short term limits shall be determined on a 30 day basis calculated daily.
(Condition #45 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

28. Emissions from the operation of the Cyclohexanone Distillation Column, CI-65 (Ref. No. VE-113ZC), in Area 6, the Cyclohexanone Production Area shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	2016 lbs every 30 days*	4.3 tons/yr

*The short term limits shall be determined on a 30 day basis calculated daily.
(Condition #46 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

29. Combined emissions from the operation of the Phenol Purification Reactors, APT-66B and APT-67B, as exhausted through the product recovery condenser, C-225, shall not exceed the limits specified below:

VOC	0.6 lbs/hr	2.3 tons/yr
Phenol	0.6 lbs/hr	2.3 tons/yr

(Condition #47 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

30. Emissions from the operation of the Area 6 non-assisted flare (Ref. Nos. FLS-61 and FLS-62) shall not exceed the limits specified below:

Nitrogen Oxides	10.6 lbs/hr	7.5 tons/year
Carbon Monoxide	88.5 lbs/hr	56.4 tons/year
Volatile Organic Compounds (VOC)	10.2 lbs/hr	6.0 tons/year

(Condition #48 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

31. Emissions from the operation of the Sales Cyclohexanone ("Nadone") tank car and tank truck loading operation in Area 6, the Cyclohexanone Production Area shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	15.4 lbs/hr	2.1 tons/yr

(Condition #49 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

32. Emissions from the operation of the CI-63 feed tank (Ref. No. VT-007) in Area 6, the Cyclohexanone Production Area shall not exceed the limits specified below:

Phenol	1.3 lbs/hr	0.95 tons/yr

(Condition #50 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

33. Emissions from the operation of the Crude Phenol Storage tank (Ref. No. VT-176) in Area 6, the Cyclohexanone Production Area shall not exceed the limits specified below:

Phenol	13.2 lbs/hr	2.2 tons/yr

(Condition #51 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

34. Emissions from the operation of the CI-64 Feed tank (Ref. No. VT-184) in Area 6, the Cyclohexanone Production Area shall not exceed the limits specified below:

Phenol	71.4 lbs/hr

(Condition #52 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

35. Emissions from the operation of the Crude Phenol Storage tanks (Ref. Nos. VT-462, VT-515) in Area 6, the Cyclohexanone Production Area shall individually not exceed the limits specified below:

Phenol	77.7 lbs/hr	4.2 tons/yr

(Condition #53 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

NSPS NNN/RRR Requirements

36. The following Area 6 affected facilities subject to NSPS Subparts NNN or RRR shall be operated in compliance with the requirements of 40 CFR 60.662(c)/60.702(c) as specified below:

    a. The following equipment shall be operated such that their vent streams shall each maintain a Total Resource Effectiveness (TRE; as defined in 40 CFR 60 Subparts NNN/RRR) value of greater than 1.0 without the use of a VOC control device at all times: APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), CI-10, CI-25, CI-36, CI-46, CI-64 and CI-65.

    (Condition #42 of the 8/9/2006 NSR Permit, 40 CFR 60 Subparts NNN and RRR and 9 VAC 5-80-110 of State Regulations)

37. The permittee shall perform an initial performance test and determine an initial process vent stream TRE (as defined in 40 CFR 60 Subparts NNN/RRR) value for APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), CI-10, CI-25 and CI-46. The Net Heating Value, the Emission Rate of Volatile Organic Compounds, and the TRE (as defined in 40 CFR 60 Subparts NNN/RRR) of the process vent streams for the above units shall be determined and calculated as defined in New Source Performance Standards, Subparts NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations) or RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes), as appropriate.
(Condition #54 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

38. The permittee shall recalculate the TRE (as defined in 40 CFR 60 Subparts NNN/RRR) index value for APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), CI-10, CI-25, CI-36, CI-46, CI-64 and CI-65 whenever process changes are made. The TRE (as defined in 40 CFR 60 Subparts NNN/RRR) index value shall be recalculated based on test data or on best engineering estimates of the effects of the change on the recovery system.
(Condition #55 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

39. Where the TRE (as defined in 40 CFR 60 Subparts NNN/RRR) value, calculated in accordance with Conditions #37 and #38, is less than or equal to 1.0, the source shall notify DEQ within a week of that determination and shall conduct a performance test consistent with the requirements of 40 CFR Part 60.664 (g)(1), New Source Performance Standards, Subpart NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations) or 40 CFR Part 60.704 (f)(1), New Source Performance Standards, Subpart RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes), as appropriate. This performance test shall be conducted as soon as possible but in no case later than 180 days after the process change prompting the recalculation.
(Condition #56 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

40. Where the TRE (as defined in 40 CFR 60 Subparts NNN/RRR) value, calculated in accordance with Conditions #37 and #38, is less than or equal to 8.0 but greater than 1.0, the source shall conduct a performance test consistent with 40 CFR 60.664(g)(2), Subpart NNN or 40 CFR Part 60.704(f)(2), Subpart

RRR. This performance test must be conducted as soon as possible but in no case later than 180 days after the process change prompting the recalculation. All performance tests conducted in accordance with this condition shall be conducted within 180 days of the process change.
(Condition #57 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

41. The permittee shall operate APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), A6-Hydro (APT-2, 4, 6, 81, 82), CI-2, CI-18, CI-9, CI-10, CI-17, CI-25, CI-26, CI-36, CI-46, CI-63, CI-64 and CI-65 in compliance with New Source Performance Standards, Subparts NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations) or RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes), as appropriate. In accordance with 40 CFR 63.110(d), for A6-Hydro (APT-2, 4, 6, 81, 82), CL-2, CL-18, CL-9, CL-17, CL-26 and CL-63, compliance with the requirements of Conditions #42-48 shall also be sufficient to demonstrate compliance with the requirements of this condition.
(Condition #58 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

HON Process Requirements

42. The following Area 6 affected facilities subject to 40 CFR 63, Subpart G shall be operated in compliance with the requirements of either 40 CFR 63.113(a)(1), 40 CFR 63.113(a)(2) or 40 CFR 63.113(e) as specified below:

    a. VOC emissions from the A6-Hydro (APT-2, 4, 6, 81, 82) reactor system (excluding cryogenics carbon bed depressurization cycles) shall be controlled by reducing TOC (total organic compounds less methane and ethane) emissions by 98 weight percent, or to a TOC concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is more stringent. Compliance with this requirement shall be achieved by the venting the VOC emissions to the >44 MW Kellogg process heater as specified in Condition #1 of this permit and by introducing the VOC emissions to the process heater with the primary fuel.

    b. VOC emissions from the following equipment shall be controlled by the Area 6 flares as specified in Conditions #2-3 of this permit: A6-Hydro (APT-2, 4, 6, 81, 82) during carbon bed depressurization and cryogenics malfunction episodes, CT-48, CT-53, CT-55, CI-2 and CI-18 (as exhausted through their common recovery device VE-02ZC), CI-9, CI-17, CI-26 and CI-63.

    c. The following equipment shall be operated such that their vent streams shall each maintain a TRE (as defined in 40 CFR 63, Subpart G) value of greater than 4.0 without the use of a VOC control device at all times: APT-83, APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), CI-10, CI-25, CI-36, CI-46, CI-64, CI-65, HT-09, HT-38, HT-45, VA-15, VA-17, VT-119, VT-021, VT-210, VT-250 and VT-456.

    (40 CFR 63.113(a)(1-2), 40 CFR 63.113(b), 40 CFR 63.113(e), Condition #42 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

43. Volatile Organic Compound emissions from the CI-63 Feed Tank (Ref. No. VT-007) of the Cyclohexanone Production Area (Ref. No. Area 6) shall be controlled by a closed-vent system routed to a water-cooled product recovery condenser (C-437). The removal efficiency of the condenser shall be at least 95%. The Permittee shall operate the product recovery condenser such that the condenser exit temperature does not exceed 132 degrees.
(40 CFR 63.170, 40 CFR 63.172(b), Condition #25 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of

State Regulations)

44. The permittee shall perform an initial TRE (as defined in 40 CFR 63, Subpart G) determination for APT-83, APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), CI-10, CI-25, CI-36, CI-46, CI-64, CI-65, HT-09, HT-38, HT-45, VA-15, VA-17, VT-119, VT-021, VT-210, VT-250 and VT-456. The Net Heating Value, the Emission Rate of Hazardous Air Pollutants, and the TRE (as defined in 40 CFR 63, Subpart G) of the process vent streams for the above units shall be determined and calculated as defined in 40 CFR 63 Subpart G - National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater.
(40 CFR 63.115(d) and 9 VAC 5-80-110 of State Regulations)

45. The permittee shall recalculate the TRE (as defined in 40 CFR 63, Subpart G) index value for APT-83, APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), CI-10, CI-25, CI-36, CI-46, CI-64, CI-65, HT-09, HT-38, HT-45, VA-15, VA-17, VT-119, VT-021, VT-210, VT-250 and VT-456 whenever process changes are made. The TRE (as defined in 40 CFR 63, Subpart G) index value shall be recalculated based on test data or on best engineering estimates of the effects of the change on the recovery system.
(40 CFR 63.115(e) and 9 VAC 5-80-110 of State Regulations)

46. Where the TRE (as defined in 40 CFR 63, Subpart G) value, calculated in accordance with Condition #45 of this permit is less than or equal to 1.0, or less than or equal to 4.0 but greater than 1.0, the permittee shall comply with the appropriate provisions in 40 CFR 63.113.
(40 CFR 63.115(e)(2) and 9 VAC 5-80-110 of State Regulations)

47. The permittee shall develop and implement a written start-up, shutdown and malfunction (SSM) plan as specified in 40 CFR 63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining Area 6 during periods of SSM and a program for corrective action for malfunctioning process and air pollution control equipment used to comply with 40 CFR 63, Subparts G and H.
(40 CFR 63.6(e)(3) and 9 VAC 5-80-110 of State Regulations)

48. Except where this permit is more restrictive than the applicable requirement, the permittee shall operate Area 6 in compliance with all requirements of 40 CFR 63 Subparts A, F, G and H.
(40 CFR 63, Subparts A, F, G, H and 9 VAC 5-80-110 of State Regulations)

Flare Requirements

49. The permittee shall design, maintain, and operate each non-assisted flare in accordance with the following requirements:

    a. Each non-assisted flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours. Test Method 22 in Appendix A of 40 CFR 60 shall be used to determine compliance with this visible emission requirement.
    (40 CFR 63.116(a), 40 CFR 63.11(b)(4) and 9 VAC 5-80-110 of State Regulations.)

    b. Each non-assisted flare shall be equipped to maintain the pilot flame during all periods of operation.

    c. Each non-assisted flare shall operate with a minimum heating value of the gas to be combusted of 7.45 MJ/scm (200 Btu per standard cubic foot) of the gas.

(40 CFR 63.116(a), 40 CFR 63.11(b)(6), Condition #65 of the 8/9/2006 NSR Permit and 9VAC 5-80-110 of State Regulations)

d. Each non-assisted flare shall operate with an exit velocity less than the velocity calculated from the following formula:

$$Log_{10}(V_{max}) = (H_T + 28.8)/31.7$$

where: V_{max} = the maximum permitted velocity < 122 m/sec (400 ft/sec)
H_T = the net heating value (condition 65)

(40 CFR 63.116(a), 40 CFR 63.11(b)(7), Condition #66 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

50. The pilot flame on each non-assisted flare shall be equipped with a heat sensing device to indicate the continuous presence of a flame. Additionally, each pilot flame shall be equipped with an alarm such that extinguishing of the flame can be recognized and corrected. During all periods of operation, to include startup and shutdown, the presence of the pilot flame shall be monitored and recorded. Data from the heat sensing device monitor shall be recorded as fifteen minute readings. All continuous monitoring devices shall be maintained and calibrated in accordance with the manufacturer's specifications. The heat sensing device shall be inspected annually and the results of the inspection recorded. If a monitor fails its inspection check, the data shall be invalid from the time of the failed inspection until corrective actions are taken and a successful re-inspection is completed.
(40 CFR 63.114(a)(2), Condition #64 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

HON LDAR Requirements

51. The permittee shall operate Area 6 in compliance with the Leak Detection and Repair Requirements of 40 CFR 63 Subpart H. The provisions of this condition apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems required by 40 CRR Subpart H that are intended to operate in organic hazardous air pollutant service 300 hours or more during a calendar year.:

a. 63.162 – Standards: General

i. Each piece of equipment in Area 6 to which 40 CFR Subpart H applies shall be identified such that it can be distinguished readily from equipment that is not subject to this subpart. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.

ii. When each leak is detected as specified in this condition or 40 CFR Subpart H, the following requirements apply:

1. Clearly identify the leaking equipment; and
2. The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of 40 CFR 63.174(c)(1)(i) of Subpart H, may be removed after it is repaired.

b. 63.163 – Standards: Pumps in light liquid service

i. The permittee shall monitor each pump monthly to detect leaks by the method specified in 40 CFR 63.180(b) of Subpart H.
ii. The instrument reading, as determined by the method as specified in 40 CFR 63.180(b) of Subpart H, that defines a leak shall be 1,000 parts per million or greater.
iii. Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected.
iv. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition #51.b.vi or 40 CFR 63.171 of Subpart H.
v. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
vi. Repair is not required unless an instrument reading of 2,000 parts per million or greater is detected.
vii. If, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in Area 6 or three pumps in Area 6 leak, the permittee shall implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176 of Subpart H.
viii. Percent leaking pumps shall be determined as specified in 40 CFR 63.163(d)(4).

c. 63.164 – Standards: Compressors

i. Each compressor shall be operated with an instrument reading of less than 500 parts per million above background as measured by the method specified in 40 CFR 63.180(c) of Subpart H.
ii. The permittee shall monitor each compressor annually to detect leaks by the method specified in 40 CFR 63.180(c) of Subpart H.

d. 63.165 – Standards: Pressure relief devices in gas/vapor service

i. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 parts per million above background except as provided in Condition #51.d.ii, as measured by the method specified in 40 CFR 63.180(c) of Subpart H.
ii. After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171 of Subpart H.
iii. No later than 5 calendar days after the pressure release and being returned to organic HAP service, the pressure relief device shall be monitored to confirm the condition indicated by an instrument reading of less than 500 parts per million above. background, as measured by the method specified in 40 CFR 63.180(c) of Subpart H.

e. 63.166 – Standards: Sampling Connection systems

i. Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system.
ii. Each closed-purge, closed-loop, or closed-vent system shall return the purged process fluid directly to the process line; or collect and recycle the purged process fluid

to a process.

f. 63.167 – Standards: Open-ended valves or lines

i. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.
ii. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair.
iii. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
iv. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Condition #51.f.i at all other times.

g. 63.168 – Standards: Valves in gas/vapor service and in light liquid service

i. The permittee shall monitor all valves at on either a monthly or quarterly basis, as specified in 40 CFR 63.168(d), to detect leaks by the method specified in 40 CFR 63.180(b) of Subpart H.
ii. The instrument reading, as determined by the method as specified in 40 CFR 63.180(b) of Subpart H, that defines a leak shall be 500 parts per million or greater.
iii. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 of Subpart H.
iv. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
v. When a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair.

h. 63.169 – Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service

i. Pumps, valves, connectors, and agitators in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and instrumentation systems shall be monitored within 5 calendar days by the method specified in 40 CFR 63.180(b) of Subpart H if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in Condition #51.h.iii, it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.180(b) of Subpart H.
ii. The instrument reading, as determined by the method as specified in 40 CFR 63.180(b) of Subpart H, that defines a leak shall be 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices.
iii. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 of Subpart H. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

iv. For equipment identified in Condition #51.h.i. that is not monitored by the method specified in 40 CFR 63.180(b) of Subpart H, repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

i. 63.171 – Standards: Delay of Repair: The permittee shall comply with the applicable delay of repair requirements of 40 CFR 63.171 of Subpart H.

j. 63.173 – Standards: Agitators in gas/vapor service and in light liquid service

i. The permittee shall monitor each agitator monthly to detect leaks by the method specified in 40 CFR 63.180(b) of Subpart H.
ii. The instrument reading, as determined by the method as specified in 40 CFR 63.180(b) of Subpart H, that defines a leak is 10,000 parts per million or greater.
iii. Each agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator. If there are indications of liquids dripping from the agitator, a leak is detected.
iv. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 of Subpart H.
v. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

k. 63.174 – Standards: Connectors in gas/vapor service and in light liquid service

i. The permittee shall monitor each connector on the frequency specified by 40 CFR 63.174(b)(3) and 63.174(c) to detect leaks by the method specified in 40 CFR 63.180(b) of Subpart H.
ii. The instrument reading, as determined by the method as specified in 40 CFR 63.180(b) of Subpart H, that defines a leak is 500 parts per million or greater.
iii. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 of Subpart H. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

l. 63.180 – Test methods and procedures: The permittee shall comply with the test methods and procedures requirements of 40 CFR 63.180 of Subpart H.

(9 VAC 5-80-110 and 40 CFR 63 Subpart H)

MON Process Requirements

52. Unless an alternative date is approved by the Administrator, as of May 10, 2008, the permittee shall operate any applicable Area 6 equipment in compliance with the requirements of 40 CFR 63 Subparts A and FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing and Miscellaneous Coating Manufacturing).
(40 CFR 63, Subparts A and FFFF and 9 VAC 5-80-110 of State Regulations)

B. Area 6 Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

General Periodic Monitoring Notes:
The EPA periodic monitoring guidance, dated September 18, 1998, indicates on page 4 that periodic monitoring is required for each emission point, at a source subject to Title V of the Act, that is subject to an applicable requirement.

EPA has also stated that MACT (40 CFR 63) and NSPS (40 CFR 60) standards promulgated in the 1990s by default can be considered to include monitoring, recordkeeping, and reporting provisions sufficient to qualify as periodic monitoring without additional requirements. Thus no additional periodic monitoring is discussion is included for 40 CFR 63 Subparts A, F, G and H (Area 6), 40 CFR 63 Subparts A and FFFF (Areas 6, 7, 8/16, 14, and the Honeywell Chemicals Area), and 40 CFR 63 Subpart EEE (Honeywell Chemicals Area). Although not necessarily promulgated prior to 1990, New Source Performance Standards Subparts NNN and RRR (Areas 6, 8/16, 7, 13), PP (Area 11), and H (SAP plant) were all examined for monitoring adequacy. Each of these Part 60 regulations were determined to have sufficient monitoring, recordkeeping and reporting requirements to provide a reasonable assurance of compliance with the applicable emission standards.

In addition, the other main sources of applicable requirements for the facility (the 8/9/2006 NSR permit, the 3/9/2006 NSR permit, the 1997 RACT agreement) have all been created since the CAAA in the 1990s. Review of these documents revealed that, in most cases, they included monitoring, recordkeeping, and reporting provisions sufficient to qualify as periodic monitoring without additional requirements. For example, the 2006 new source review permits included extensive material throughput limitations and associated recordkeeping provisions.

Exceptions to this were the opacity standards from the 2006 NSR permits. Also, the new/modified source opacity standard of 9 VAC 5-50-80 and the existing source Rules from Chapter 40 of Virginia's regulations (Rules 4-8 and 4-25) do not contain any specific or enforceable monitoring requirements, so periodic monitoring was applied to these standards in the Title V permit.

Since there are no real monitoring provisions for the opacity requirements (Conditions #22-23 of the 3/9/20063 NSR permit and Conditions #197-197, 206, 208 and 212 of the 8/9/2006 NSR permit) in the 2006 NSR permits, an opacity observation schedule along with associated recordkeeping and reporting provisions were added. A similar protocol was used as periodic monitoring for the equipment subject to the new/modified source opacity standard of 9 VAC 5-50-80 (all other equipment with visible emissions).

A monitoring protocol (sampling/analysis of fuel oil for sulfur and heat content and associated recordkeeping for the Rule 4-8 SO2 standard; periodic performance testing opacity observations for the Rule 4-8 particulate and opacity standards) was developed and included in the Title V permit for the Chapter 40 fuel burning equipment requirements (Rule 4-8). Similarly, a monitoring protocol (certification of submerged fill pipe/bottom fill) was developed and included in the Title V permit for the Chapter 40 storage tank requirements (Rule 4-25).

For all actual monitoring (i.e. opacity checks, monthly/annual inspections, etc.), records shall be kept to verify the occurrence and results of the monitoring. In addition, the source shall submit to the DEQ reports of any opacity observations which reveal visible emissions in excess of an applicable standard.

The applicable periodic monitoring for the Area 6 equipment is defined as follows (the source of the monitoring appears in parentheses after the requirement along with a Title V periodic monitoring regulatory reference)(also, the condition/requirement numbers may not always match those of the Title V permit itself):

Monitoring

53. The permittee shall conduct annual inspections on the storage tanks and level control systems subject to Condition #12 to insure that the storage tanks and level control systems are maintained and operated in good working order. The permittee shall expeditiously take corrective action as necessary to address any malfunctioning equipment discovered in any inspection.
(9 VAC 5-80-110)

54. The permittee shall install a flow indicator that provides a record of vent stream flow from CI-65new to the flare at least once every hour. The flow indicator shall be installed in the vent stream from each affected facility at a point closest to the flare and before being joined with any other vent stream.
(Condition #59 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

55. The permittee shall install, calibrate and maintain a monitoring device which continuously measures and permanently records the product side outlet temperature for each of the following product recovery condensers: CL-26, CL-36, CL-64, CL-65, VT-007 and APT-66B/67B. During all periods of operation, the devices shall continuously monitor and record the product side outlet temperature for the product recovery condensers listed above. Data from the continuous temperature monitors for CL-26 and CL-65 shall be recorded as fifteen minute readings and reduced to 3-hour rolling averages. A valid 3-hour average shall consist of no less than 90% valid readings. Data from the continuous temperature monitors for CL-36, CL-64, VT-007 and APT-66B/67B shall be recorded as fifteen minute readings and reduced to daily rolling averages. A valid daily average shall consist of no less than 90% valid readings. The continuous temperature monitors shall be calibrated annually.
(40 CFR 63.172(e), Condition #E.19 of the 3/26/1997 RACT Agreement, Conditions #60, #61, #62 and #63 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

56. The permittee shall conduct annual inspections of the VT-007 closed-vent system and product recovery condenser C-437 as specified in 40 CFR 63.180(b). Any leaks detected shall be repaired as specified in 40 CFR 63.172(h).
(40 CFR 63.172(f) and 9 VAC 5-80-110 of State Regulations)

57. The permittee shall install, calibrate, maintain and operate flow indicators that, at least once every 15 minutes, determine whether vent stream flow in any line that bypasses the Kellogg process heater, either non-assisted flare or condenser C-437 is present. The flow indicators shall be installed at the entrance to any bypass line that could divert the vent stream away from the control devices to the atmosphere. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this condition.
(40 CFR 63.114(d)(1), Condition #E.22 of the 3/26/1997 RACT Agreement, Condition #67 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Recordkeeping

58. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

a. Flare records

i. The existence of the pilot flame for each flare, recorded hourly;
ii. The total hours, estimated production and length of time APT-1, the naxol batch reactor is operational and is venting to the flare.
iii. The yearly throughput of natural gas to Area 6 non-assisted flares, calculated monthly as the sum of each consecutive 12 month period.
iv. The number of times and the length of each occurrence where visible emissions are observed from either flare.

b. The annual throughput, in pounds (gallons for Nadone) per year, for Nadone TT/RC loading and Columns 2, 9, 17, 18, 26, 36, 63, 64, 65, and 65new calculated monthly as the sum each consecutive 12 months period.

c. Records necessary to demonstrate compliance with the emissions limitations in Section III.C of this permit.

d. The maximum hourly throughput, in pounds per hour, for Columns 2, 9, 17, 18, 26, 36, 63, 64, 65, and 65new.

e. NSPS NNN/RRR records

i. For CI-10, CI-25, CI-36, CI-46, CI-64 and CI-65:

1. Any changes in production capacity, feedstock type, or catalyst type, or any replacement, removal or addition of recovery equipment or a distillation unit;
2. Any calculation or recalculation of the TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index value performed pursuant to 40 CFR 60.664(f) or 40 CFR 60.664(g); and
3. The results of the initial performance test and any subsequent performance tests performed pursuant to the methods and procedures required by 40 CFR 60.664(e).

ii. For APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225):

1. Any changes in production capacity, feedstock type, or catalyst type, or any replacement, removal or addition of recovery equipment or reactors;
2. Any recalculation of the TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index value performed pursuant to 40 CFR 60.704(f);
3. The results of the initial performance test and any subsequent performance tests performed pursuant to the methods and procedures required by 40 CFR 60.704(d); and
4. The initial test for determining the TRE (as defined in 40 CFR 60 Subpart

NNN/RRR) index and the results of the initial TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index calculation.

f. HON process records

i. For APT-83, APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), CI-10, CI-25, CI-36, CI-46, CI-64, CI-65, HT-09, HT-38, HT-45, VA-15, VA-17, VT-119, VT-021, VT-210, VT-250 and VT-456:

1. All measurements, engineering assessments, and calculations performed to determine the TRE (as defined in 40 CFR 63 Subpart G) index value of each vent stream. Documentation of engineering assessments shall include all data, assumptions, and procedures used for the engineering assessments;
2. Any process changes including changes in production capacity, feedstock type, or catalyst type, or any replacement, removal or addition of recovery equipment or reactors; and
3. Any recalculation of the TRE (as defined in 40 CFR 63 Subpart G) index value performed pursuant to 40 CFR 63.115(e).

(40 CFR 63.117(b) and 63.118(c))

ii. For the A6-Hydro (APT-2, 4, 6, 81, 82) reactor system (excluding cryogenics carbon bed depressurization cycles):

1. the location at which the vent stream is introduced into the Kellogg process heater; and

(40 CFR 63.117(a)(4)(iii) and 63.118(a)(3-4))

iii. For A6-Hydro (APT-2, 4, 6, 81, 82) during carbon bed depressurization and cryogenics malfunction episodes, CT-48, CT-53, CT-55, CI-2 and CI-18 (as exhausted through their common recovery device VE-02ZC), CI-9, CL-17, CI-26 and CI-63:

1. The total hours and estimated emissions from Area-6 Hydro when the cryogenics unit is shutdown;
2. Records of the design of each flare;
3. Records of all visible emission observations, heat content determinations, flow rate measurements, exit velocity determinations and any other information necessary to determine compliance with Condition #49; and
4. Records of the pilot flame monitoring data required by Condition #50 for each flare; including hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour and records of the times and durations of all periods when all pilot flames are absent or the monitors are not operating.

(40 CFR 63.117(a)(5) and 63.118(a)(1-4))

iv. For the product recovery condensers for CL-36, CL-64, APT-66B/67B and VT-007, the daily average outlet temperature for each refrigerated product recovery condenser. (Conditions #60, #62 and #63 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

v. For the product recovery condensers for CL-26 and CL-65:

1. The results of the annual continuous temperature monitoring device calibrations for each condenser.
2. The 15 min readings and 3-hour rolling averages for the continuous temperature monitoring device for each condenser.
3. All 3-hour periods of operation, calculated on a rolling average, in which the average outlet product side temperature is more than 5 degrees Fahrenheit above the maximum average product side temperature that demonstrated compliance during the most recent performance test.
4. An explanation for each temperature excursion identified in Condition #58.f.v.3 .

(Conditions #61 and #63 of the 8/9/2006 NSR Permit and Conditions #E.18 and #E.19 of the 3/26/1997 RACT Agreement)

vi. For each Group 2 storage vessel (VT-176, VT-188, VT-29, VT-462, VT-515), records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept as long as the storage vessels retain Group 2 status and are in operation.
(40 CFR 63.123(a))

vii. Record and update annually the following information for each Group 2 Loading Rack (Nadone loading, Naxol loading and Naxol loading with methanol):

1. An analysis demonstrating the design and actual annual throughput of the transfer rack;
2. An analysis documenting the weight-percent organic HAP's in the liquid loaded. Examples of acceptable documentation include but are not limited to analyses of the material and engineering calculations; and
3. An analysis documenting the annual rack weighted average HAP partial pressure of the transfer rack.

(40 CFR 63.130(f))

g. HON LDAR records

i. A list of the identification numbers for equipment subject to 40 CFR 63 Subpart H.
(40 CFR 63.181(b)(1)(i))

ii. A schedule for monitoring connectors subject to the provisions of 40 CFR 63.174(a) of this subpart and valves subject to the provisions of 40 CFR 63.168(d).
(40 CFR 63.181(b)(1)(ii))

iii. A list of identification numbers for compressors that the owner or operator elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.164(i).
(40 CFR 63.181(b)(2)(ii))

iv. Identification of surge control vessels and bottoms receivers equipped with a closed-vent system and control device in accordance with 40 CFR 63 Subpart H.
(40 CFR 63.181(b)(2)(iii))

v. A list of identification numbers for pressure relief devices subject to the provisions in 40 CFR 63.165(a).
(40 CFR 63.181(b)(3)(i))

vi. Identification of instrumentation systems subject to the provisions of this subpart. Individual components in an instrumentation system need not be identified.
(40 CFR 63.181(b)(4))

vii. For any leaks detected as specified in Condition #51, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
(40 CFR 63.181(b)(10))

viii. For visual inspections of equipment subject to the provisions of this subpart (e.g., 40 CFR 63.163(b)(3), 40 CFR 63.164(e)(4)(i)), the owner or operator shall document that the inspection was conducted and the date of the inspection.
(40 CFR 63.181(c))

ix. For each leak detected as specified in Condition #51, records required by 40 CFR 63.181(d), including:

1. The instrument and the equipment identification number and the operator name, initials, or identification number;
2. The date the leak was detected and the date of first attempt to repair the leak;
3. The date of successful repair of the leak;
4. Maximum instrument reading measured by Method 21 of 40 CFR part 60, Appendix A after it is successfully repaired or determined to be nonrepairable;
5. “Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;
6. Dates of process unit shutdowns that occur while the equipment is unrepaired;

(40 CFR 63.181(d))

x. The dates and results of each compliance test required for compressors subject to the provisions in 40 CFR 63.164(i) and the dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in 40 CFR 63.165(a-b). The results shall include The background level measured during each compliance test and the maximum instrument reading measured at each piece of equipment during each compliance test.
(40 CFR 63.181(f))

xi. For the VT-007 closed-vent system and condenser:

1. Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams;
2. The dates and descriptions of any changes in the design specifications;
3. A description of the parameter or parameters monitored, as required in 40 CFR 63.172(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring;
4. Dates and durations when the closed-vent systems and condenser are not operated as designed as indicated by the monitored parameters;
5. Dates and durations during which the monitoring system or monitoring device is inoperative;
6. Dates and durations of start-ups and shutdowns of the condenser;

7. Records of the annual inspections required by Condition #56 of this permit and 40 CFR 63.172(f); for each inspection during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected; for each inspection during which leaks were detected, the information specified in 40 CFR 63.181(d) shall be recorded; and
8. A schematic diagram of the affected vent streams, collections systems, fuels systems, flares and any bypass systems.

(40 CFR 63.181(g))

xii. For each piece of equipment in heavy liquid service, the permittee shall retain information, data, and analyses used to determine that the piece of equipment is in heavy liquid service.
(40 CFR 63.181(i)(1))

xiii. Identification, either by list, location (area or group) of equipment in organic HAP service less than 300 hours per year.
(40 CFR 63.181(j))

h. Leak detection and repair records as necessary to demonstrate compliance with Condition #10.

i. Certification of submerged fill pipe (or bottom filling design) for each storage tank subject to Condition #11.

j. Hourly records of whether the flow indicators required by Condition #57 were operating and whether flow was detected at any time within the hour as well as records of the times and duration of all periods when the vent streams are diverted from the control devices or the monitors are not operating.

k. Maintenance, operations, inspections, and training

i. Records of the annual inspections and any resulting corrective actions required by Condition #53.
ii. Scheduled and unscheduled maintenance records for all process equipment and air pollution control equipment.
iii. Inventory of spare parts to minimize duration of air pollution control equipment breakdowns.
iv. Written operating procedures for all process equipment and air pollution control equipment.
v. Operator training records.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(Condition #70 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Reporting

59. The permittee shall furnish written notification to the Director, Piedmont Regional of:

a. The actual date of modification for APT-66B, APT-67B, A6-Hydro (APT-2, 4, 6, 81, 82), CI-2, CI-18, CI-9, CI-10, CI-17, CI-25, CI-26, CI-36, CI-46, CI-63, CI-64 and CI-65 within 10 days after such date.

b. The actual date of start-up for the modified APT-66B, APT-67B, A6-Hydro (APT-2, 4, 6, 81, 82), CI-2, CI-18, CI-9, CI-10, CI-17, CI-25, CI-26, CI-36, CI-46, CI-63, CI-64 and CI-65 within 15 days after such date. The notification for each unit shall include the specific provision of either 60.662 or 60.702 with which the permittee will comply. For A6-Hydro (APT-2, 4, 6, 81, 82), the notification shall also include a description of the location at which the vent stream is introduced into the Kellogg process heater.

c. For APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), any recalculation of the TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index value as recorded under 40 CFR 60.705(g) reported semiannually in accordance 40 CFR 60.705(l).

d. For CI-10, CI-25, CI-36, CI-46, CI-64 and CI-65, any recalculation of the TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index value as recorded under 40 CFR 60.665(h) reported semiannually in accordance 40 CFR 60.665(l).

Copies of written notifications required by subsections (b-d) of this condition are to be sent to:

Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(Condition #69 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

60. The permittee shall submit the following reports to demonstrate compliance with this permit. The content of and format of such reports shall be arranged with the Director, Piedmont Region. These reports shall include, but are not limited:

a. Periodic Reports containing the information specified in 40 CFR 63.117-118 for process vents, the information specified in 40 CFR 63.122 for storage vessels, the information specified in 40 CFR 63.129-130 for transfer operations and the information specified in 40 CFR 63.182(d) for equipment leaks and repair. These reports shall be submitted semiannually, no later than 60 days after the end of each 6-month period. This information includes but is not limited to:

i. For APT-83, APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), CI-10, CI-25, CI-36, CI-46, CI-64, CI-65, HT-09, HT-38, HT-45, VA-15, VA-17, VT-119, VT-021, VT-210, VT-250 and VT-456, reports of any process changes;
(40 CFR 63.152(c)(4)(i))

ii. Where the TRE (as defined in 40 CFR 63, Subpart G) value, calculated in accordance with Condition #45 of this permit is less than or equal to 1.0, or less than or equal to 4.0 but greater than 1.0, the owner or operator shall notify DEQ within a week of that determination and submit a report within 180 days of the process change as specified in 40 CFR 63.118(g-h);
(40 CFR 63.115(e)(2) and 9 VAC 5-80-110 of State Regulations)

iii. Reports of the times and durations of all periods recorded under Condition #58.j when a gas stream is diverted to the atmosphere through a bypass;
(40 CFR 63.118(f)(3))

iv. Reports of the times and durations of all periods recorded under Condition #58.f.iii.4 in which all pilot flames of a flare were absent;
(40 CFR 63.118(f)(5))

v. The number of valves for which leaks were detected, the percent leakers, and the total number of valves monitored;
(40 CFR 63.182(d)(2)(i))

vi. The number of valves for which leaks were not repaired, identifying the number of those that are determined nonrepairable;
(40 CFR 63.182(d)(2)(ii))

vii. The number of pumps for which leaks were detected, the percent leakers, and the total number of pumps monitored;
(40 CFR 63.182(d)(2)(iii))

viii. The number of pumps for which leaks were not repaired;
(40 CFR 63.182(d)(2)(iv))

ix. The number of compressors for which leaks were detected;
(40 CFR 63.182(d)(2)(v))

x. The number of compressors for which leaks were not repaired;
(40 CFR 63.182(d)(2)(vi))

xi. The number of agitators for which leaks were detected;
(40 CFR 63.182(d)(2)(vii))

xii. The number of agitators for which leaks were not repaired;
(40 CFR 63.182(d)(2)(viii))

xiii. The number of connectors for which leaks were detected, the percent of connectors leaking, and the total number of connectors monitored;
(40 CFR 63.182(d)(2)(ix))

xiv. The number of connectors for which leaks were not repaired, identifying the number of those that are determined nonrepairable;
(40 CFR 63.182(d)(2)(xi))

xv. The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible; and
(40 CFR 63.182(d)(2)(xiii))

xvi. The results of all monitoring to show compliance with 40 CFR 63.164(i), 40 CFR 63.165(a) and 40 CFR 63.172(f) conducted within the semiannual reporting period.
(40 CFR 63.182(d)(2)(xiv))

b. Start-up, Shutdown and malfunction Reports containing the information specified in 40 CFR 63.10(d)(5)(i). These reports shall be submitted on the same schedule as the Periodic Reports referenced in paragraph (a) of this condition.

Copies of written notifications required by subsections (a-b) of this condition are to be sent to:

Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(9 VAC 5-80-110 of State Regulations)

C. Area 9 Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Control Equipment Requirements

61. Particulate emissions from the hydroxylamine disulfonate section of the "A" train (Ref. No. TW-62) shall be controlled by a Brinks Mist Eliminator. The reduction efficiency of the mist eliminator shall be at least 98%. (Condition #71 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

62. Particulate emissions from the ammonium nitrite section of the "B" train (Ref. No. TW-8) shall be controlled by a fixed throat Venturi scrubber. The reduction efficiency of the scrubber shall be at least 90% for Total Suspended Particulates and 90% for PM-10 emissions. The liquid flow to the scrubber shall be maintained at all times.
(Condition #72 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

63. Particulate emissions from the hydroxylamine disulfonate section of the "B" train (Ref. No. TW-9) shall be controlled by a Brinks Mist Eliminator. The reduction efficiency of the mist eliminator shall be at least 98%. (Condition #73 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

64. Sulfur Dioxide emissions from the Hydroxylamine Disulfonate section of the "C" train (Ref. No. TW-18) shall be controlled by a Packed Bed scrubber. The reduction efficiency of the scrubber shall be at least 90%. The liquid flow to the scrubber shall be maintained at all times.
(Condition #74 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

65. Nitrogen oxide emissions from the ammonium nitrite section of the "D" train (Ref. No. TW-22) shall be controlled by Honeywell's NO Oxidizer Time Tank. The removal efficiency of the NO Oxidizer shall be at least 70%.
(Condition #75 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

66. Particulate emissions from the ammonium nitrite section of "D" train (Ref. No. TW-22) shall be controlled by a fixed throat venturi scrubber. The reduction efficiency of the scrubber shall be at least 90% for Total Suspended Particulates and 90% for PM-10 emissions. The liquid flow to the scrubber shall be maintained at all times.
(Condition #76 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

67. Nitrogen oxide emissions from the hydroxylamine diammonium sulfonate section of the "D" train (Ref. No. TW-23) shall be controlled by a packed bed scrubber. The Nitrogen Oxide removal efficiency of the scrubber shall be, at a minimum, 50%. The liquid flow to the scrubber shall be maintained at all times.
(Condition #77 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

68. Nitrogen oxide emissions from the ammonium nitrite section of the "E" train (Ref. No. TW-32) shall be controlled by Honeywell's NO Oxidizer Time Tank. The removal efficiency of the NO Oxidizer shall be at least 70%.
(Condition #78 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

69. Particulate emissions from the ammonium nitrite section of the "E" train (Ref. No. TW-32) shall be controlled by a fixed throat Venturi scrubber. The removal efficiency of the scrubber shall be at least 90%. (Condition #79 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

70. Nitrogen oxide emissions from the hydroxylamine diammonium sulfonate section of the "E" train (Ref. No. TW-33) shall be controlled by a packed bed scrubber. The Nitrogen Oxide removal efficiency of the

scrubber shall be, at a minimum, 50%. The liquid flow to the scrubber shall be maintained at all times.
(Condition #80 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

71. Particulates from the hydroxylamine diammonium sulfonate section of the "E" train (Ref. No. TW-33) shall be controlled by a Brinks mist eliminator. The removal efficiency of the mist eliminator shall be at least 98%.
(Condition #81 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

72. Sulfur dioxide emissions from the hydroxylamine diammonium sulfonate section of the "E" train (Ref. No. TW-33) shall be controlled by a packed bed scrubber. The Sulfur Dioxide removal efficiency of the scrubber shall be, at a minimum, 90%. The liquid flow to the scrubber shall be maintained at all times.
(Condition #82 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

73. The Area 9 Supplemental Cooling Tower for the Area 9 Production Area shall use no chromium based water treatment chemicals. The term “chromium based water treatment chemicals” shall have the meaning given in 40 CFR 63.401.
(Condition #83 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Throughput Limits

74. The annual input of ammonia to the ammonium nitrite section of "A" Train (Ref. No. TW-2) shall not exceed 3,653.8 ammonium nitrite units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #86 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

75. The annual input of ammonia to the ammonium nitrite section of "B" Train (Ref. No. TW-8) shall not exceed 3,832.1 ammonium nitrite units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #87 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

76. The annual input of ammonia to the ammonium nitrite section of "C" Train (Ref. No. TW-17) shall not exceed 3,143.0 ammonium nitrite units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #88 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

77. Regardless of the limitations imposed in conditions 86 through 88, the combined annual input of ammonia to the ammonium nitrite sections of "A", "B", and "C" Train (Ref. Nos. TW-2, 8, and 17) shall not exceed 10,629.8 ammonium nitrite units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #89 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

78. The annual input of ammonia to the ammonium nitrite section of "D" Train (Ref. No. TW-22) shall not exceed 5,098.3 ammonium nitrite units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #90 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

79. The annual input of ammonia to the ammonium nitrite section of "E" Train (TW-32) shall not exceed 5,098.3 ammonium nitrite units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #91 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

80. The annual input of Ammonia to the Area 9 Hydroxylamine Sulfate Production area shall not exceed 68,191,200 hydroxylamine sulfate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #84 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

81. The annual input of sulfur to the hydroxylamine diammonium sulfonate section of "A" Train (Ref. No. TW-62) shall not exceed 24,017.3 hydroxylamine diammonium sulfonate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #92 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

82. The annual input of sulfur to the hydroxylamine diammonium sulfonate section of "B" Train (TW-9) shall not exceed 21,910.5 hydroxylamine diammonium sulfonate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #93 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

83. The annual input of sulfur to the hydroxylamine diammonium sulfonate section of "C" Train (TW-18) shall not exceed 26,966.8 hydroxylamine diammonium sulfonate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #94 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

84. Regardless of the limitations imposed in conditions 92 through 94, the annual input of sulfur to the hydroxylamine diammonium sulfonate sections of "A", "B", and "C" Train (TW-62, 9, and 18) shall not exceed 72,894.6 hydroxylamine diammonium sulfonate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #95 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

85. The annual input of sulfur to the hydroxylamine diammonium sulfonate section of "D" Train (TW-23) shall not exceed 34,054.8 hydroxylamine diammonium sulfonate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #96 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

86. The annual input of sulfur to the hydroxylamine diammonium sulfonate section of "E" Train (TW-33) shall not exceed 34,054.8 hydroxylamine diammonium sulfonate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #97 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

87. The annual input of Sulfur to Area 9 Hydroxylamine Sulfate Production area shall not exceed 137,159.6 hydroxylamine diammonium sulfonate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #85 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limits

88. Emissions from the operation of the ammonium nitrite section of the "A" train (Ref. No. TW-2) shall not exceed the limits specified below:

Total Suspended Particulates	11.1 lbs/hr	32.0 tons/yr
Particulate Matter (PM-10)	4.0 lbs/hr	11.5 tons/yr

Nitrogen Oxides (as NO_2)	781.0 lbs/hr	1673.0 tons/yr

(Condition #98 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

89. Emissions from the operation of the ammonium nitrite section of the "B" train (Ref. No. TW-8) shall not exceed the limits specified below:

Total Suspended Particulates	3.8 lbs/hr	12.0 tons/yr
Particulate Matter (PM-10)	1.9 lbs/hr	6.0 tons/yr
Nitrogen Oxides (as NO_2)	853.0 lbs/hr	1844.0 tons/yr

(Condition #99 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

90. Emissions from the operation of the ammonium nitrite section of the "C" train (Ref. No. TW-17) shall not exceed the limits specified below:

Total Suspended Particulates	21.2 lbs/hr	76.2 tons/yr
Particulate Matter (PM-10)	7.6 lbs/hr	27.4 tons/yr
Nitrogen Oxides (as NO_2)	900.0 lbs/hr	1257.0 tons/yr

(Condition #100 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

91. Regardless of the limits expressed in Conditions #88 through #90 above, emissions from the operation of the ammonium nitrite section of the Area 9 (Ref. Nos. TW-2, 8 and 17) shall not exceed the limits specified below:

Total Suspended Particulates	39.9 lbs/hr	98.0 tons/yr
Particulate Matter (PM-10)	15.4 lbs/hr	37.0 tons/yr
Nitrogen Oxides (as NO_2)	2774.0 lbs/hr	4774.0 tons/yr

(Condition #101 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

92. Emissions from the operation of the ammonium nitrite section of the "D" train (Ref. No. TW-22) shall not exceed the limits specified below:

Total Suspended Particulates	3.8 lbs/hr	12.0 tons/yr

Particulate Matter (PM-10)	1.9 lbs/hr	6.0 tons/yr
Nitrogen Oxides (as NO_2)	240.0 lbs/hr	600.0 tons/yr

(Condition #102 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

93. Emissions from the operation of the ammonium nitrite section of the "E" train (Ref. No. TW-32) shall not exceed the limits specified below:

Total Suspended Particulates	3.8 lbs/hr	12.0 tons/yr
Particulate Matter (PM-10)	1.9 lbs/hr	6.0 tons/yr
Nitrogen Oxides (as NO_2)	240.0 lbs/hr	600.0 tons/yr

(Condition #103 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

94. Emissions from the operation of the hydroxylamine diammonium sulfonate section of the "A " train (Ref. No. TW-62) shall not exceed the limits specified below:

Total Suspended Particulates	1.2 lbs/hr	4.5 tons/yr
Particulate Matter (PM-10)	1.2 lbs/hr	4.5 tons/yr
Sulfur Dioxide	9.7 lbs/hr	39.8 tons/yr
Nitrogen Oxides (as NO_2)	500.0 lbs/hr	1244.0 tons/yr

(Condition #104 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

95. Emissions from the operation of the hydroxylamine diammonium sulfonate section of the "B " train (Ref. No. TW-9) shall not exceed the limits specified below:

Total Suspended Particulates	1.2 lbs/hr	4.5 tons/yr
Particulate Matter (PM-10)	1.2 lbs/hr	4.5 tons/yr
Sulfur Dioxide	17.0 lbs/hr	69.3 tons/yr
Nitrogen Oxides (as NO_2)	500.0 lbs/hr	1092.0 tons/yr

(Condition #105 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

96. Emissions from the operation of the hydroxylamine diammonium sulfonate section of the "C" train (Ref. No.

TW-18) shall not exceed the limits specified below:

Total Suspended Particulates	1.2 lbs/hr	4.5 tons/yr
Particulate Matter (PM-10)	1.2 lbs/hr	4.5 tons/yr
Sulfur Dioxide	1.7 lbs/hr	7.0 tons/yr
Nitrogen Oxides (as NO_2)	500.0 lbs/hr	1155.0 tons/yr

(Condition #106 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

97. Regardless of the limits expressed in Conditions #94 through #96 above, emissions from the operation of the hydroxylamine diammonium sulfonate section of area 9 (Ref. Nos. TW-62, 9, and 18) shall not exceed the limits specified below:

Total Suspended Particulates	4.8 lbs/hr	12.0 tons/yr
Particulate Matter (PM-10)	4.8 lbs/hr	12.0 tons/yr
Sulfur Dioxide	30.1 lbs/hr	113.0 tons/yr
Nitrogen Oxides (as NO_2)	1800.0 lbs/hr	3491.0 tons/yr

(Condition #107 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

98. Emissions from the operation of the hydroxylamine diammonium sulfonate section of the "D" train (Ref. No. TW-23) shall not exceed the limits specified below:

Total Suspended Particulates	1.2 lbs/hr	4.5 tons/yr
Particulate Matter (PM-10)	1.2 lbs/hr	4.5 tons/yr
Sulfur Dioxide	1.7 lbs/hr	7.0 tons/yr
Nitrogen Oxides (as NO_2)	300.0 lbs/hr	600.0 tons/yr

(Condition #108 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

99. Emissions from the operation of the hydroxylamine diammonium sulfonate section of the "E " train (Ref. No. TW-33) shall not exceed the limits specified below:

Total Suspended Particulates	1.6 lbs/hr	4.5 tons/yr
Particulate Matter	1.6 lbs/hr	4.5 tons/yr

(PM-10)		
Sulfur Dioxide	2.1 lbs/hr	8.3 tons/yr
Nitrogen Oxides (as NO_2)	300.0 lbs/hr	600.0 tons/yr

(Condition #109 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

D. Area 9 Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Monitoring

100. A continuous emission monitoring system (CEMS) for NO_X monitoring, including a continuous emission rate monitoring system (CERMS), shall be installed on the "D" train ammonium nitrite (TW-22) and hydroxylamine disulfonate towers (TW-23). The NO_X CEMS and CERMS shall meet the quality assurance requirements of 40 CFR 60, Appendix F. Data from the NO_X CEMS and the CERMS shall be used to determine direct compliance with the hourly emission limits in Conditions #92 and #98 on a three (3) hour rolling average. All three (3) hour rolling averages must be reported quarterly in the excess emission report.
(Condition #111 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

101. A continuous emission monitoring system (CEMS) for NO_X monitoring, including a continuous emission rate monitoring system (CERMS), shall be installed on the "E" train ammonium nitrite (TW-32) and disulfonate towers (TW-33). The NO_X CEMS and CERMS shall meet the quality assurance requirements of 40 CFR 60, Appendix F. Data from the NO_X CEMS and the CERMS shall be used to determine direct compliance with the hourly emission limits in Conditions #93 and #99 on a three (3) hour rolling average. All three (3) hour rolling averages must be reported quarterly in the excess emission report.
(Condition #110 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

102. EMCAMS shall be installed and operated on A, B and C trains (TW-2 & 62, TW-8 & 9, TW-17 & 18) in Area 9. The EMCAMS systems shall meet all the requirements detailed in Appendix A of the August 26, 2002 Consent Order between DEQ and the Honeywell International, Inc. In addition, the permittee shall maintain and implement the most recently approved EMCAMS monitoring plan. The monitoring plan shall specify the process parameters (temperature, pressure, feed rates, flow rates, etc.) monitored by EMCAMS for each A-C train emission unit, along with associated monitoring locations, methods and frequencies and data acquisition, QA/QC procedures and recordkeeping. The monitoring plan shall also define operating ranges for each monitoring parameter and procedures for identifying parameter excursions and correcting the operation of affected emission units in the case of parameter excursions. The permittee shall maintain a copy of the most recently approved monitoring plan on site at all times.
(Appendix A of 8/26/2002 Consent Order, Condition #112 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

103. The permittee shall conduct performance tests on A, B and C trains (TW-2 & 62, TW-8 & 9, TW-17 & 18) in Area 9 for Nitrogen Oxides to determine compliance with the Nitrogen Oxides emission limits contained in Conditions #88-90 and #94-96 and to validate the performance the of the EMCAMS systems required in Condition #102. The tests shall be performed, and demonstrate compliance at least once during the 5-year term of this permit. Unless otherwise approved by the Director, Piedmont Region, the tests shall be performed between the second and third years of each permit term. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of State Regulations,

and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests are to be arranged with the Director, Piedmont Region. The permittee shall submit a test protocol at least 30 days prior to testing. Four copies of the test results shall be submitted to the Director, Piedmont Region within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-110 of State Regulations)

104. Honeywell, Inc. - Hopewell Plant shall install, calibrate, operate and maintain devices to continuously measure and permanently record the operating parameters described below. The devices shall be provided with adequate access for inspection:

a. A-Train

i. Ammonium Nitrite Section (TW-2): None.

ii. Hydroxylamine diammonium disulfonate section (TW-62): The total pressure drop across the TW-62 mist eliminator (SE-88). The permittee shall maintain the total pressure drop across SE-88 necessary to demonstrate compliance with the requirements of Condition #61.

b. B-Train

i. Ammonium Nitrite Section (TW-8): The total pressure drop across and the scrubber liquid flow rate for the TW-8 venturi scrubber (SE-179). The permittee shall maintain the total pressure drop across and the scrubber liquid flow rate for SE-179 necessary to demonstrate compliance with the requirements of Condition #62.

ii. Hydroxylamine diammonium disulfonate section (TW-9): The total pressure drop across the TW-9 mist eliminator (SE-89). The permittee shall maintain the total pressure drop across SE-89 necessary to demonstrate compliance with the requirements of Condition #63.

c. C-Train

i. Ammonium Nitrite Section (TW-17): None.

ii. Hydroxylamine diammonium disulfonate section (TW-18): The total pressure drop across and the scrubber liquid flow rate for the TW-18 packed bed scrubber (SE-19). The permittee shall maintain the total pressure drop across and the scrubber liquid flow rate for SE-19 necessary to demonstrate compliance with the requirements of Condition #64.

d. D-Train

i. Ammonium Nitrite Section (TW-22): The total pressure drop across and the scrubber liquid flow rate for the TW-22 venturi scrubber (SE-65) and the total pressure drop across the TW-22 NO oxidizer time tank (VT-883). The permittee shall maintain the total pressure drop across and the scrubber liquid flow rate for SE-65 and the total pressure drop across VT-883 necessary to demonstrate compliance with the requirements of Conditions #65 and #66.

ii. Hydroxylamine diammonium disulfonate section (TW-23): The total pressure drop across and the scrubber liquid flow rate for the TW-23 packed bed NOx reactor/scrubber (SE-32). The permittee shall maintain the total pressure drop across and the scrubber liquid flow rate for SE-32 necessary to demonstrate compliance with the requirements of Condition #67.

e. E-Train

i. Ammonium Nitrite Section (TW-32): The total pressure drop across the TW-32 venturi scrubber (SE-116) and the total pressure drop across the TW-32 NO oxidizer time tank (VT-847). The permittee shall maintain the total pressure drops across SE-116 and VT-847 necessary to demonstrate compliance with the requirements of Conditions #68 and #69.

ii. Hydroxylamine diammonium disulfonate section (TW-33): The total pressure drop across and the scrubber liquid flow rate for the TW-33 packed bed NOx reactor/scrubber (SE-54) and the total pressure drop across the TW-33 mist eliminator (SE-101). The permittee shall maintain the total pressure drop across and the scrubber liquid flow rate for SE-54 and the total pressure drop across SE-101 necessary to demonstrate compliance with the requirements of Conditions #70-72.

(Conditions #61-72 and #117 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Recordkeeping

105. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to the following:

a. Control requirements: Control device operating parameters specified in Condition #104.

b. Throughput limitations:

i. Annual throughputs of sulfur or ammonia for the equipment specified in Conditions #74-87;

ii. The maximum hourly production rate of Ammonium Nitrite for each Ammonium Nitrite Tower for "A" through "E" trains in Area 9 recorded monthly; and

iii. The maximum hourly production rate of Hydroxylamine Disulfonate for each disulfonate system in "A" through "E" trains in Area 9 recorded monthly.

c. EMCAMS monitoring parameter records as specified by EMCAMS monitoring plan required by Condition #102.

d. EMCAMS production/emission records as follows:

i. The hourly ammonia feed rates for TW-2, TW-8 and TW-17;

ii. The hourly sulfur feed rates for TW-62, TW-9 and TW-18; and

iii. The annual NOx emission rates for TW-2, TW-62, TW-8, TW-9, TW-17 and TW-18, calculated monthly as the sum of each consecutive 12 month period.

e. Emission limits: production rates and other data necessary to determine compliance with the emission limits in Conditions #88-99.

f. Maintenance, operations, and training

i. Scheduled and unscheduled maintenance records for all process equipment and air pollution control equipment;

ii. Inventory of spare parts to minimize durations of air pollution control equipment breakdowns;

iii. Written operating procedures for all process equipment and air pollution control equipment; and

iv. Operator training records.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(Conditions #123 and #124 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Reporting

106. The permittee shall furnish written reports to the Director, Piedmont Regional Office as follows:

a. Semi-annual reports of the annual ammonia feed rates for the A, B and C train ammonium nitrite towers calculated monthly as the sum of each previous consecutive 12 month period;

b. Semi-annual reports of the annual sulfur feed rates for the A, B and C train hydroxylamine diammonium sulfonate towers calculated monthly as the sum of each previous consecutive 12 month period;

c. Annual reports of the annual NOx emission rates for the A, B and C train ammonium nitrite towers calculated monthly as the sum of each previous consecutive 12 month period;

d. Annual reports of the annual NOx emission rates for the A, B and C train hydroxylamine diammonium sulfonate towers calculated monthly as the sum of each previous consecutive 12 month period;

e. Excess emission reports for the CEM systems on the “D” train and “E” train ammonium nitrite (TW-22, TW-32) and hydroxylamine diammonium sulfonate (TW-23, TW-33) sections within 30 days after the end of each calendar quarter. Each quarterly excess emission report shall contain, at a minimum, the dates included in the calendar quarter and the following (additional details of the quarterly reports are to be arranged with the Director, Piedmont Regional Office):

i. The three (3) hour rolling averages of NO_X emissions, in lbs/hr.

ii. The results of daily calibration drift tests.

iii. Periods of time when the monitor was not functioning, reasons why, and corrective actions taken.

iv. Results of quarterly accuracy assessment.

v. Periods of excess emissions with reasons, or a statement that no excess emissions occurred.

vi. Identification of times when NO_X concentration exceeded full span of CEMS.

At a minimum, all one hour averages shall be available on site at all times and shall be accessible for inspection by DEQ and shall be current for the most recent five (5) years.

(Conditions #119, #120, and #121 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

E. Area 8/16 Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

- The 7/6/1979 NSR permit conditions 15-16 are included in the Title V permit. These conditions limit the operation of the cobalt catalyst process. The other conditions of the 7/6/1979 NSR permit are either obsolete, environmentally insignificant, or inapplicable for the Title V program.

Control Equipment Requirements

107. Volatile Organic Compound emissions from the organic liquid storage tank VT-221, the A-Toluizer (CI-29), B-Toluizer (CI-28), C-Toluizer (CI-29new), CI-15new, CI-62new, C-361, CI-15, and CI-62 in Area-16 shall be controlled by a Thermal Oxidizer. The oxidizer shall maintain a minimum combustion temperature of 1400 degrees Fahrenheit and a minimum retention time of 0.5 seconds. The TOC reduction efficiency of the oxidizer shall be at least 98% or to a TOC concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is more stringent. The oxidizer shall be provided with adequate access for inspection.
(Condition #E.4 of the 3/26/1997 RACT Agreement, Condition #125 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

108. VOC emissions from the organic liquid storage tank VT-221 shall be controlled by a control method that will remove, destroy or prevent the discharge into the atmosphere of at least 60% by weight of VOC emissions during the filling of such tank. Control of VOC emissions from VT-221 as specified in Condition #107 shall be considered acceptable achievement of this standard.
(9 VAC 5-80-110, 9 VAC 5-40-3430 A and 9 VAC 5-40-3440 A)

109. Fugitive VOC emissions resulting from equipment leaks in those portions of Area 8/16 not already subject to fugitive emissions requirements from other applicable regulations shall be controlled through a Leak Detection and Repair (LDAR) program. The LDAR program shall be substantively equivalent to the LDAR requirements specified in 40 CFR 60, Subpart VV.
(Condition #E.7 of the 3/26/1997 RACT Agreement and 9 VAC 5-80-110 of State Regulations)

110. The Caprolactam Production Area Industrial Process Cooling Towers for the 7, 8, 16, and 9 Production Areas shall use no chromium based water treatment chemicals. Chromium based water treatment chemicals shall have the meaning given them in 40 CFR 63.401.
(Condition #126 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Throughput Limits

111. The annual production of Crude Caprolactam from the Rearrangement system in Area 8 and 16 shall not exceed 159,885 rearranger production units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #127 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

112. The combined annual input of Oleum to the Area 8 Cyclohexanone Oxime Rearrangers section (VT-867,

VT-404A, APT- 8 and APT-32) shall not exceed 209,367.5 rearranger Oleum units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #128 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

113. The combined annual input of Cyclohexanone Oxime to the Area 8 Cyclohexanone Oxime Rearrangers section (VT-867, VT-404A, APT-32, and APT-8) shall not exceed 92,767.5 rearranger oxime units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #129 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

114. The annual input of Area 6 Cyclohexanone to Area 8 and 16 Crude Caprolactam Production shall not exceed 108,916,000 Area 8/16 input units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #135 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

115. The annual input of mixed aqueous and organic feed to the Toluene/Sulfate stripping column (Ref. No. CI-15) shall not exceed 540,320 toluene/sulfate stripping column units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #130 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

116. The annual input of mixed aqueous and organic feed to the Toluene/Sulfate stripping column (Ref. No. CI-15new) shall not exceed 540,320 toluene/sulfate stripping column units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #131 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

117. The annual input of mixed toluene/caprolactam feed to the Toluene/caprolactam distillation column (Ref. No. CI-62) shall not exceed 147,610 toluene/caprolactam distillation column units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #132 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

118. The annual input of mixed toluene/caprolactam feed to the Toluene/caprolactam distillation column (Ref. No. CI-62new) shall not exceed 147,610 toluene/caprolactam distillation column units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #133 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

119. The annual input of purified liquid Caprolactam to the Area 8 Flakers 1-2 shall not exceed 6,150 flaker input units each, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #134 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

120. The annual production of cobalt catalyst from the Area 8/16 Cobalt Catalyst Manufacturing process shall not exceed 10.8 Area 8/16 input units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #15 of the 7/6/1979 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limits

121. Emissions from the operation of the Area 8 Rearrangement Process (Ref. Nos. VT-404A, VT-867, APT-32, and APT-8) shall not exceed the limits specified below:

Volatile Organic Compounds (VOC's)	8.4 lbs/hr	0.2 tons/yr

(Condition #136 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

122. Emissions from the operation of Area 8 and 16, the Crude Caprolactam Production Area shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	17.0 lbs/hr	33.0 tons/yr

(Condition #137 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

123. Emissions from the operation of the Area 8 and 16 thermal oxidizer shall not exceed the limits specified below:

Nitrogen Oxides	2.0 lbs/hr	1.9 tons/yr
Carbon Monoxide	10.3 lbs/hr	35.0 tons/yr
Volatile Organic Compounds (VOC)	7.2 lbs/hr	4.4 tons/yr

(Condition #138 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

124. Emissions from the operation of the Area 8/16 Cobalt Catalyst Manufacturing process shall not exceed the limits specified below:

Particulate Emissions	0.5 lbs/hr	0.025 tons/yr

(Condition #16 of the 7/6/1979 NSR Permit and 9 VAC 5-80-110 of State Regulations)

125. No owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater that 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-80-110 and 9 VAC 5-50-80 of State Regulations)

NSPS NNN/RRR Requirements

126. The following Area 8/16 affected facilities subject to NSPS Subpart RRR shall be operated in compliance with the requirements of 40 CFR 60.700(c)(4) as specified below:

a. The Area 8/16 rearrangement process shall be operated such that the vent stream flow rate from the process is less than 0.011 scm/min.

(40 CFR 60 Subpart RRR 60.700(c)(4) and 9 VAC 5-80-110 of State Regulations)

127. The following Area 8/16 affected facilities subject to 40 CFR 60, Subpart NNN shall be operated in compliance with the requirements of 40 CFR 60.662(a) as specified below:

a. As specified in Condition # 107, VOC emissions from the CL-15, CL-15New, CL-62 and CL-62New shall be controlled by reducing TOC (total organic compounds less methane and ethane) emissions by 98 weight percent, or to a TOC concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is more stringent.

(40 CFR 60.662(a) and 9 VAC 5-80-110 of State Regulations)

MON Process Requirements

128. Unless an alternative date is approved by the Administrator, as of May 10, 2008, the permittee shall operate any applicable Area 8/16 equipment in compliance with the requirements of 40 CFR 63 Subparts A and FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing and Miscellaneous Coating Manufacturing).
(40 CFR 63, Subparts A and FFFF and 9 VAC 5-80-110 of State Regulations)

F. Area 8/16 Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Monitoring

129. Each emission unit subject to Condition #125, including the Area 8/16 thermal oxidizer, shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have any visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having any visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110 of State Regulations)

130. Initial performance tests for Volatile Organic Compounds from CI-15 and CI-15new shall be conducted using an appropriate EPA Reference Method, approved by the Regional Director, to determine that a VOC destruction efficiency of at least 98% on a mass basis consistent with Condition #127 or that a VOC emissions concentration of 20 ppmv, on a dry basis, corrected to 3 percent oxygen is being achieved by the thermal oxidation unit. The tests shall be performed, and demonstrate compliance, within 60 days after achieving the maximum production rate but in no event later than 180 days after start-up of the permitted facility. During the tests, Honeywell, Inc. - Hopewell Plant shall be required to operate all process equipment, exhausted to this unit, at a minimum of 80% of their maximum rated capacity. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30 of the SAPCB Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Regional Director. Three copies of the test results shall be submitted to the Regional Director within 45 days after test completion.
(Condition #140 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

131. Initial performance tests for Volatile Organic Compounds from CI-62 shall be conducted using an appropriate EPA Reference Method, approved by the Regional Director, to determine that a VOC destruction efficiency of at least 98% on a mass basis consistent with Condition #127 or that a VOC emissions concentration of 20 ppmv, on a dry basis, corrected to 3 percent oxygen is being achieved by the thermal oxidation unit. The tests shall be performed, and demonstrate compliance, within 60 days after achieving the maximum production rate but in no event later than 180 days after start-up of the permitted facility. During the tests, Honeywell, Inc. - Hopewell Plant shall be required to operate all process equipment, exhausted to this unit, at a minimum of 80% of their maximum rated capacity. Tests shall be conducted and reported and data reduced as set forth in Sections 9 VAC 5-50-30 and 9 VAC 5-60-30 of the SAPCB Regulations, and the test methods and procedures contained in each applicable section or subpart listed in Sections 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Regional Director. Three copies of the test results shall be submitted to the Regional Director within 45 days after test completion.
(Condition #141 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

132. Initial performance tests for Volatile Organic Compounds from CI-62new shall be conducted using an appropriate EPA Reference Method, approved by the Regional Director, to determine that a VOC destruction efficiency of at least 98% on a mass basis consistent with Condition #127 or that a VOC emissions concentration of 20 ppmv, on a dry basis, corrected to 3 percent oxygen is being achieved by the thermal oxidation unit. The tests shall be performed, and demonstrate compliance, within 60 days after achieving the maximum production rate but in no event later than 180 days after start-up of the permitted facility. During the tests, Honeywell, Inc. - Hopewell Plant shall be required to operate all process equipment, exhausted to this unit, at a minimum of 80% of their maximum rated capacity. Tests shall be conducted and reported and data reduced as set forth in Sections 9 VAC 5-50-30 and 9 VAC 5-60-30 of the SAPCB Regulations, and the test methods and procedures contained in each applicable section or subpart listed in Sections 9 VAC 5-50-410 and 9 VAC 5-60-70. The details of the tests are to be arranged with the Regional Director. Three copies of the test results shall be submitted to the Regional Director within 45 days after test completion.
(Condition #142 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

133. In lieu of performing the initial performance tests described in conditions 130-132 above Honeywell - Hopewell Plant may apply to the Administrator to waive the requirement for performance testing. In this waiver request, Honeywell must demonstrate by means other than these initial performance tests that the affected columns, CI-15, CI-15new, CI-62 and CI-62new, are in compliance with 60.662(a) of 40 CFR Part 60. The waiver request shall be submitted to:

Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

within 60 days of achieving maximum rate but in no circumstances later than 180 days after initial start-up. Copies of the waiver request are to be sent to the Director, DEQ - Piedmont Regional Office.
(Condition #143 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

134. The permittee shall establish the retention time of the combustion gas in the Area 8/16 thermal oxidizer during the initial testing that achieves the destruction efficiency of 98% on a mass basis. This retention time shall not be lower the 0.5 seconds.
(Condition #144 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

135. During all periods of operation, to include startup and shutdown, the thermal oxidizer firebox chamber temperatures shall be continuously monitored and recorded. Data from the continuous temperature monitor shall be recorded as fifteen minute readings and reduced to 3-hour averages on a rolling basis. A valid 3-hour average shall consist of no less than 90% valid readings. All continuous monitoring devices shall be maintained and calibrated in accordance with the manufacturer's specifications. The continuous temperature monitors shall be calibrated annually and the results of the calibrations recorded. If a monitor fails its calibration check (i.e. calibration error exceeds manufacturer's specifications), the temperature data shall be invalid from the time of the failed calibration check until corrective actions are taken and a successful recalibration is completed.
(40 CFR 63.663(a)(1)(i), Condition #146 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

136. The thermal oxidation unit shall operate at a minimum temperature determined during the most recent performance testing which demonstrated compliance with Condition #127.
(Condition #145 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

137. Honeywell, Inc. - Hopewell Plant shall install, calibrate, maintain and operate a flow indicator that, at least once every 15 minutes, determines whether vent stream flow in any line that bypasses the thermal oxidizer is present. The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this condition.
(40 CFR 63.663(a), Condition #147 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Recordkeeping

138. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to the following:

a. Throughput limitations:

i. The annual production of crude Caprolactam from the Area 8/16 rearrangement system, calculated monthly as the sum of each previous consecutive 12 month period as well as the hourly production rate of crude Caprolactam;

ii. The combined annual input of Oleum and the combined annual input of Cyclohexanone Oxime to the Area 8/16 rearrangement system, calculated monthly as the sum of each previous consecutive 12 month period;

iii. The annual input of Area 6 cyclohexanone to Area 8/16 Crude Caprolactam Production Area, calculated monthly as the sum of each previous consecutive 12 month period;

iv. The annual throughput of mixed feed for the equipment specified in Conditions #115-118;

v. The yearly throughput of natural gas to the Area 8 and 16 thermal oxidizer, calculated monthly as the sum of each consecutive 12 month period;

vi. The annual production of cobalt catalyst from the Area 8/16 Cobalt Catalyst Manufacturing process, calculated monthly as the sum of each consecutive 12 month period; and

vii. The yearly throughput of caprolactam to the Area 8 flakers #1-2, each calculated monthly as the sum of each consecutive 12 month period.

b. Thermal Oxidizer NSPS Subpart NNN records:

i. The firebox chamber temperature of the thermal oxidizer maintained as a 3 hour rolling average;

ii. All three hour periods of operation, calculated as a rolling average, where the average combustion temperature is more than 50 degrees Fahrenheit below the minimum average combustion temperature demonstrated during the most recent performance test that demonstrated compliance with Condition #127 and an explanation for each such reduction in temperature;
(40 CFR 63.665(c)(1) and Condition #145 of the 8/9/2006 NSR Permit)

iii. The total number of times and the length of each occurrence where the thermal oxidizer by-pass line was used; and

iv. For CL-15, CL-15New, CL-62 and CL-62New during each initial performance test:

1. Records of the average firebox temperature of the thermal oxidizer, measured at least every 15 minutes and averaged over the same time period of the performance test; and
2. Records of the percent reduction of TOC achieved by the thermal oxidizer, or the concentration of TOC (ppmv, by compound) at the outlet of the thermal oxidizer on a dry basis corrected to 3 percent oxygen.

(40 CFR 60.665(b))

v. For each flow indicator required by Condition #127, the permittee shall maintain hourly records of whether the flow indicator was operating and whether flow was detected at any time within the hour as well as records of the times and durations of all periods when the vent stream is diverted from the control device or the monitor is not operating.
(60.665(d) and Condition #147 of the 8/9/2006 NSR Permit)

c. NSPS Subpart RRR records:

i. Any changes in the Area 8 and 16 Rearrangement Process affecting production capacity, feedstock type, or catalyst type, or of any replacement, removal or addition of recovery equipment or reactors;

ii. Any performance testing performed on the Area 8 rearrangers consistent with 40 CFR 60.704(l)(5); and

iii. A record of the initial test for determining the emissions flow rate of the Rearrangement Process and the results of the initial flow rate calculation.

d. Visible Emission limit: The results of the monthly visible emission surveys required by Condition #129 and details of any corrective action taken as a result of these inspections.

e. Emission limits: Emission factors and any other information necessary to demonstrate compliance with the emission limits of Conditions #121-124.

f. Maintenance, operations, and training

i. Scheduled and unscheduled maintenance records for all process equipment and air pollution control equipment;

ii. Inventory of spare parts to minimize durations of air pollution control equipment breakdowns;

iii. Written operating procedures for all process equipment and air pollution control equipment; and

iv. Operator training records.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(40 CFR 60.663(a) and 60.665, 40 CFR 60.705(h) and 60.705(o), Conditions #152 and #154 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Reporting

139. The permittee shall furnish written notification to the Director, Piedmont Regional Office of any change in equipment or process operation that increases the design flow rate of the Area 8 Rearrangers above the low flow exemption level in 60.700(c)(3), reported semiannually in accordance with 40 CFR 60.705(l), for the Area-8 Rearranger system activities. Also, the permittee shall furnish written notification to the Director, Piedmont Regional Office of any temperature exceedences as defined on Condition #136 and any vent stream diversions as defined in Condition #137, reported semiannually in accordance with 40 CFR 60.665(l), for CL-15, CL-15New, CL-62 and CL-62New. Copies of written notifications are to be sent to:

Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
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These must be reported as soon as possible after the change and no later than 180 days after the change. The source shall perform testing as defined in 60.705(l)(5).
(40 CFR 60.665(l) and 60.705(l), Condition #149 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

140. The permittee shall furnish written notification to the Director, Piedmont Regional of:

a. The actual date on which construction of the Area 8 flaker #2 and CI-15new commenced within 10 days after such date.

b. The anticipated start-up date of the Area 8 flaker #2 and CI-15new postmarked not more than 60 days nor less than thirty (30) days prior to such date.

c. The actual start-up date of the Area 8 flaker #2 and CI-15new within 10 days after such date.

d. The anticipated date of performance tests of CI-15new postmarked at least thirty (30) days prior to such date.

(Condition #150 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

141. The permittee shall furnish written notification to the Director, Piedmont Regional of:

a. The actual date on which modification of the Area 8 rearrangement system, CI-15, CI-62 and CI-62new commenced within 10 days after such date.

b. The anticipated start-up date of the modified CI-15, CI-62 and CI-62new postmarked not more than 60 days nor less than thirty (30) days prior to such date.

c. The actual start-up date of the modified Area 8 rearrangement system, CI-15, CI-62 and CI-62new within 10 days after such date.

d. The anticipated date of performance tests of the modified CI-15, CI-62 and CI-62new postmarked

at least thirty (30) days prior to such date.
(Condition #151 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

142. The permittee shall report the results of any 40 CFR Part 60 method 9 opacity test performed as a result of Condition #129. If the test indicates the facility is out of compliance with the standard contained in Condition #125, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E.
(9 VAC 5-80-110 of State Regulations)

G. Area 7 Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Control Equipment Requirements

143. Volatile Organic Compound emissions from C-train crystallizers APT-22 and APT-23, D-train crystallizers APT-24 and APT-25, A-train crystallizers APT-39-42, wash water concentrator CI-12, crude caprolactam concentrator CI-21, caprolactam product distillation column CL-70, caprolactam strippers EV-8 and EV-12, caprolactam dryers EV-14-16, caprolactam strippers EV-17 and EV-18, bottoms concentrator VT-36, water stripper VT-220, caprolactam dryer VT-327, wash water concentrator VT-394, and caprolactam strippers VT-395 and VT-799 shall be vented to the Area 7 barometric condenser (Ref. No. C-323). The barometric condenser shall be provided with adequate access for inspection.
(Condition #155 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

144. Particulate emissions from the Caprolactam remelt facility (Ref. No. Remelt) of the Caprolactam Purification Production Area (Ref. No. Area 7) and the Area 8 flaker shall be vented to a fume scrubber (SC-61). Particulate emissions from the Area 8 flaker #2 shall be vented to a fume scrubber (SC-New). The scrubbers shall maintain a reduction efficiency of 90%. The scrubbers shall be provided with adequate access for inspection.
(Condition #156 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

NSPS Subpart NNN Requirements

145. The Area 7 barometric condenser (Ref. No. C-323) affected facility shall be operated such that the vent stream shall maintain a Total Resource Effectiveness (TRE) value of greater than 1.0 at all times without the use of VOC emission control equipment. The Area 7 barometric condenser (Ref. No. C-323) affected facility shall consist of the following: C-train crystallizers APT-22 and APT-23, D-train crystallizers APT-24 and APT-25, A-train crystallizers APT-39-42, wash water concentrator CI-12, crude caprolactam concentrator CI-21, caprolactam product distillation column CL-70, caprolactam strippers EV-8 and EV-12, caprolactam dryers EV-14-16, caprolactam strippers EV-17 and EV-18, bottoms concentrator VT-36, water stripper VT-220, caprolactam dryer VT-327, wash water concentrator VT-394, and caprolactam strippers VT-395 and VT-799.
(40 CFR 60.662(c), Condition #162 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

146. The permittee shall operate the Area 7 barometric condenser (Ref. No. C-323) affected facility (as specified in Condition #145) consistent with New Source Performance Standards, Subpart NNN, Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations.
(40 CFR 60, Subpart NNN, Condition #170 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Throughput Limits

147. The annual input of Area 16 Crude Caprolactam, washwater, regenerated and Remelted Caprolactam to Area 7 Purified Caprolactam Production shall not exceed 5,793,000 Area 7 production units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #157 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

148. The annual input of Area 16 Crude Caprolactam to Area 7 Purified Caprolactam Production shall not exceed 5,130,000 Area 7 production units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #158 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

149. The combined annual input of Caprolactam to the Area 7 Remelt Facility and the Area 8 flaker #1 shall not exceed 960,000 Area 7 production units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #159 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

150. The annual input of Purified Caprolactam to the product distillation column (Ref. No. CI-70) shall not exceed 3,258,000 Area 7 production units, calculated monthly as the sum of the previous consecutive 12 month period.
(Condition #160 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

151. The annual input of combined regenerated caprolactam and Washwater caprolactam to VT-394 and CI-12 (Ref. No. Washwater system) shall not exceed 360,400 Area 7 regen/washwater units, calculated monthly as the sum of the previous consecutive 12 month period.
(Condition #161 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limitations

152. Emissions from the operation of the Area 7 Barometric Condenser (Ref. No. C-323) shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	0.3 lbs/hr	0.5 tons/year

(Condition #163 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

153. Emissions from the combined operation of the Area 7 Remelt Facility and Area 8 flaker #1, as exhausted through fume scrubber SC-61, shall not exceed the limits specified below:

Total Suspended Particulates (TSP)	0.1 lbs/hr	0.5 tons/year
Particulate matter (PM-10)	0.1 lbs/hr	0.3 tons/year
Volatile Organic Compounds (VOC)	0.1 lbs/hr	0.5 tons/year

Emission from the operation of the Area 8 flaker #2, as exhausted through fume scrubber SC-New, shall not exceed the limits specified below:

Total Suspended Particulates (TSP)	0.1 lbs/hr	0.3 tons/year
Particulate matter (PM-10)	0.1 lbs/hr	0.2 tons/year
Volatile Organic Compounds (VOC)	0.1 lbs/hr	0.3 tons/year

(Condition #164 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

154. No owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater that 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-80-110 and 9 VAC 5-50-80 of State Regulations)

MON Process Requirements

155. Unless an alternative date is approved by the Administrator, as of May 10, 2008, the permittee shall operate any applicable Area 7 equipment in compliance with the requirements of 40 CFR 63 Subparts A and FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing and Miscellaneous Coating Manufacturing).
(40 CFR 63, Subparts A and FFFF and 9 VAC 5-80-110 of State Regulations)

H. Area 7 Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Monitoring

156. Each emission unit subject to Condition #154, including the Area 7 Caprolactam Remelt facility and the Area 8 flakers #1 and #2, shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have any visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having any visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110 of State Regulations)

157. The permittee shall recalculate the TRE index value for the Area 7 barometric condenser affected facility whenever a process change is made to one of the units included in the affected facility (as specified in Condition #145). The TRE index value shall be recalculated based on test data or on best engineering estimates of the effects of the change on the affected facility.
(40 CFR 60.664(g), Condition #167 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

158. Where the TRE value, calculated in accordance with Conditions #157, is less than or equal to 1.0, the permittee shall conduct a performance test consistent with the requirements of the 40 CFR 60.664, New Source Performance Standards, Subpart NNN, Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. This performance test shall be conducted as soon as possible but in no case later than 180 days after the process change prompting the recalculation.
(40 CFR 60.664(g)(1), Condition #168 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

159. Where the TRE value, calculated in accordance with Conditions #157, is less than or equal to 8.0 but greater than 1.0, the permittee shall conduct a performance test consistent with 40 CFR 60.664, Subpart NNN. This performance test must be conducted as soon as possible but in no case later than 180 days after the process change prompting the recalculation. All performance tests conducted in accordance with this condition shall be conducted within 180 days of the process change.

(40 CFR 60.664(g)(2), Condition #169 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Recordkeeping

160. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

a. The yearly throughput of caprolactam to the Area 7 crystallizers/purification systems, calculated monthly as the sum of each consecutive 12 month period.

b. The yearly throughput of washwater/wastewater to the Area 7 Washwater System, calculated monthly as the sum of each consecutive 12 month period.

c. The yearly throughput of Caprolactam to the Area 7 Caprolactam product distillation column (ref. No. CI-70), calculated monthly as the sum of each consecutive 12 month period.

d. The yearly throughput of Caprolactam to the Area 7 A train crystallizers (Ref. Nos. Apt-42, 41, 39), calculated monthly as the sum of each consecutive 12 month period.

e. The combined yearly throughput of caprolactam to the Area 7 remelt facility and Area 8 flaker, calculated monthly as the sum of each consecutive 12 month period.

f. The yearly emissions of Volatile Organic Compounds from the Barometric Condenser (Ref. No. C-323), calculated monthly as the sum of each consecutive 12 month period.

g. Emission factors and any other information necessary to demonstrate compliance with the emission limits of Conditions #152-153.

h. The initial test for determining the VOC emissions from the barometric condenser C-323 and the results of the test.

i. The initial test for determining the TRE index value of the Area 7 barometric condenser C-323 affected facility (as specified in Condition #145) and the results of the initial TRE index value calculation.

j. Any process change to the Area 7 barometric condenser C-323 affected facility (as specified in Condition #145) which prompts recalculation of the TRE.

k. Any recalculation of the TRE index value for the Area 7 barometric condenser C-323 affected facility (as specified in Condition #145) performed pursuant to 40 CFR 60.664(d).

l. Records of any performance test performed as a result of recalculation of the TRE value for the Area 7 barometric condenser C-323 affected facility (as specified in Condition #145).

m. The results of the monthly visible emission surveys required by Condition #156 and details of any corrective action taken as a result of these inspections.

n. Scheduled and unscheduled maintenance records for all process equipment and air pollution control equipment.

o. Inventory of spare parts to minimize durations of air pollution control equipment breakdowns.

p. Written operating procedures for all process equipment and air pollution control equipment.

q. Operator training records.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(40 CFR 60.665(h), Condition #176 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Reporting

161. The permittee shall furnish written notification to the Director, Piedmont Regional Office of any recalculation of the TRE index value, reported semiannually in accordance with 40 CFR 60.665(h), for the Area-7 barometric condenser affected facility (as specified in Condition #152). Copies of written notifications are to be sent to:

Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(40 CFR 60.665(l)(7), Condition #171 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

162. Where the TRE value, calculated in accordance with Condition #157, is less than or equal to 1.0, the permittee shall notify the Director, Piedmont Regional Office, within a week of that determination. Copies of written notifications are to be sent to:

Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(40 CFR 60.664(g)(1), Condition #168 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

163. The permittee shall furnish written notification to the Director, Piedmont Regional of:

a. The actual date on which modification of the crystallizers/purification systems (Ref. Nos. APT-22, 23, 24, and 25), the wash water concentrators (Ref. Nos. CL-12 and VT-394), and the Area 7 barometric condenser (C-323) commenced within 10 days after such date.

b. The anticipated start-up date of the crystallizers/purification systems (Ref. Nos. APT-22, 23, 24, and 25), the wash water concentrators (Ref. Nos. CL-12 and VT-394), and the Area 7 barometric condenser (C-323) postmarked not more than 60 days nor less than thirty (30) days prior to such date.

c. The actual start-up date of the crystallizers/purification systems (Ref. Nos. APT-22, 23, 24, and 25), the wash water concentrators (Ref. Nos. CL-12 and VT-394), and the Area 7 barometric

condenser (C-323) within 10 days after such date.

Copies of written notifications are to be sent to:

Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(40 CFR 60.7 and 60.8, Conditions #172, #173 and #175 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

164. The permittee shall report the results of any 40 CFR Part 60 method 9 opacity test performed as a result of Condition #156. If the test indicates the facility is out of compliance with the standard contained in Condition #154, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E. (9 VAC 5-80-110 of State Regulations)

I. Area 11 Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Control Equipment Requirements

165. Particulate emissions from the rotary dryer, RD-3, shall be controlled by a Ducon Wet Scrubber (DC-7). The liquid flow to the scrubber shall be maintained at all times. The Wet Scrubber shall be provided with adequate access for inspection.
(Condition #177 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

166. Particulate emissions from the rotary dryer, RD-4, shall be controlled by a CGS Dynascrubber Wet scrubber/mist eliminator (DC-11). The liquid flow to the scrubber shall be maintained at all times. The scrubber shall maintain a minimum control efficiency of 99%. The scrubber/mist eliminator shall be provided with adequate access for inspection.
(Condition #178 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

167. Particulate emissions from the rotary dryer, RD-6, shall be controlled by a mechanical scrubber/mist eliminator (DC-12). The liquid flow to the scrubber shall be maintained at all times. The scrubber shall maintain a minimum control efficiency of 99%. The scrubber/ mist eliminator shall be provided with adequate access for inspection.
(Condition #179 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

168. Particulate emissions from the rotary dryer, RD-7, shall be controlled by a Ducon Wet Scrubber (DC-29). The Wet Scrubber shall be provided with adequate access for inspection.
(Condition #180 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

169. Particulate emissions from the Area-11 Centrifuges (Ref. No. DC-25), shall be controlled by a Ducon wet cyclone scrubber. The liquid flow to the scrubber shall be maintained at all times. The scrubber shall be provided with adequate access for inspection.
(Condition #181 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

170. Fugitive particulate emissions from the BLDG 12 Ammonium Sulfate Storage and Loading Operation, the

three (3) triple deck screens and the mid-grade conveyor (Ref. No. SC-65, SC-66, SC-67, CO-225) shall be controlled by a wet scrubber (Ref. No. DC-21). The liquid flow to the scrubber shall be maintained at all times. The wet scrubber shall be provided with adequate access for inspection.
(Condition #183 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

171. Fugitive particulate emissions from the BLDG 12 Ammonium Sulfate Storage and Loading Operation, the ammonium sulfate bulk storage bin/loading station, the bulk storage bin conveyor and the bulk storage bin elevator (Ref. No. EL-25) shall be controlled by a baghouse (Ref. No. DC-31). The baghouse shall have a particulate removal efficiency of at least 99%. The baghouse shall be provided with adequate access for inspection.
(Condition #184 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

172. Fugitive particulate emissions from the Ammonium Sulfate Handling and Loading Operation shall be controlled by the application of Dustrol anti-caking agent (or equivalent) at all times, except for periods of maintenance, malfunction, and product quality adjustment, however, this downtime period shall not exceed 90% of the Ammonium Sulfate Handling and Loading Operation's operating schedule. The Dustrol anti-caking agent (or equivalent) shall have a particulate emission reduction efficiency of at least 50%. The Dustrol anti-caking agent (or equivalent) application system shall be provided with adequate access for inspection.
(Condition #185 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Throughput Limits

173. The annual input of Aqueous Ammonium Sulfate Solution from Area 8 and 16 Crude Caprolactam Production and Area 14 Oximes Production and Performance Chemicals plant to Area 11 Ammonium Sulfate Production shall not exceed 35,340 Area 11 production units (as ammonium sulfate product), calculated monthly as the sum of each previous consecutive 12 month period.
Condition #186 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

174. The annual input of ammonium sulfate to RD-4 shall not exceed 16,302 Area 11 production units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #187 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

175. The annual input of ammonium sulfate to RD-6 shall not exceed 11,913 Area 11 production units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #188 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

176. The annual input of standard ammonium sulfate to BLDG-12 shall not exceed 39,615 Area 11 production units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #190 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

177. The annual input of ammonium sulfate to the Ammonium Sulfate Railcar/ Ship/Barge Product Loading Operation and the Truck Product Loading Operation shall not exceed 265,950 Area 11 loading units of combined (all grades) product ammonium sulfate, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #191 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

178. The annual input of standard ammonium sulfate to the Railcar/Ship/Barge Product Loading Operation and the Truck Product Loading Operation shall not exceed 171,450 Area 11 loading units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #192 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

179. The Sulfate loading to the outdoor storage Pad operation in Area 11 shall not exceed 5,400 Area 11 loading units, calculated monthly as the sum of each previous consecutive 12 month period. Condition #193 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limitations

180. Emissions from the operation of the Area 11 ammonium sulfate dryer designated RD-4 (Vent Stack number DC-11) shall not exceed 0.3 pounds of particulate matter per ton of ammonium sulfate produced. (40 CFR 60.422, Condition #194 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

181. Emissions from the operation of the Area 11 ammonium sulfate dryer designated RD-6 (Vent Stack number DC-12) shall not exceed 0.3 pounds of particulate matter per ton of ammonium sulfate produced. (40 CFR 60.422, Condition #195 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

182. Emissions from the operation of the Area 11 ammonium sulfate dryer designated RD-3 (Vent Stack number DC-7) shall not individually exceed the limits specified below:

Nitrogen Oxides (as NO_2)	0.5 lbs/hr	2.0 tons/yr

(Condition #200 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

183. Emissions from the operation of the Area 11 ammonium sulfate dryer designated RD-4 (Vent Stack numbers DC-11) shall not individually exceed the limits specified below:

Total Suspended Particulates	9.6 lbs/hr	42.9 tons/yr
Particulate Matter (PM-10)	4.8 lbs/hr	21.5 tons/yr
Nitrogen Oxides (as NO_2)	1.5 lbs/hr	6.7 tons/yr
Volatile Organic Compounds (VOC)	5.7 lbs/hr	24.4 tons/yr

(Condition #201 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

184. Emissions from the operation of the Area 11 ammonium sulfate dryer designated RD-6 (Vent Stack number DC-12) shall not individually exceed the limits specified below:

Total Suspended Particulates	7.0 lbs/hr	31.4 tons/yr
Particulate Matter (PM-10)	3.5 lbs/hr	15.7 tons/yr
Nitrogen Oxides (as NO_2)	0.5 lbs/hr	2.1 tons/yr
Volatile Organic	4.1 lbs/hr	17.8 tons/yr

Compounds (VOC)
(Condition #202 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

185. Emissions from the operation of the Area 11 ammonium sulfate dryer designated RD-7 (Vent Stack numbers DC-29) shall not individually exceed the limits specified below:

Nitrogen Oxides (as NO_2)	0.85 lbs/hr	3.72 tons/yr

(Condition #203 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

186. Regardless of the emission limits imposed by Conditions #182-185 of this permit, total emissions from the operation of the Area 11 ammonium sulfate dryers designated RD-3, RD-4, RD-6, and RD-7 (Vent Stack numbers DC-7, DC-11, DC-12 and DC-29) shall not exceed the limits specified below:

Total Suspended Particulates	29.3 lbs/hr	107.3 tons/yr
Particulate Matter (PM-10)	14.7 lbs/hr	53.7 tons/yr
Carbon Monoxide	0.8 lbs/hr	2.4 tons/yr
Nitrogen Oxides (as NO_2)	3.4 lbs/hr	11.4 tons/yr
Volatile Organic Compounds (VOC)	17.4 lbs/hr	51.7 tons/yr

(Condition #204 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

187. Emissions from the operation of the BLDG.-12 Ammonium Sulfate Storage and Screening operation designated Stack number DC-21 shall not exceed the limits specified below:

Total Suspended Particulates (Including PM-10)	2.2 lbs/hr	7.3 tons/yr
Particulate Matter (PM-10)	2.2 lbs/hr	7.3 tons/yr

(Condition #205 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

188. Emissions from the operation of the BLDG.-12 Ammonium Sulfate Storage and Screening operation designated Stack number DC-31 shall not exceed the limits specified below:

Total Suspended Particulates (Including PM-10)	1.4 lbs/hr	4.8 tons/yr
Particulate Matter (PM-10)	1.4 lbs/hr	4.8 tons/yr

(Condition #207 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

189. Fugitive emissions from the operation of the BLDG.-12 Ammonium Sulfate Storage and Screening operation shall not exceed the limits specified below:

Total Suspended Particulates	2.5 lbs/hr	8.4 tons/yr
Particulate Matter (PM-10)	1.3 lbs/hr	4.2 tons/yr

(Condition #209 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

190. Fugitive emissions from the operation of the Ammonium Sulfate Handling and Loading operation excluding the emissions from the outdoor storage pad operation shall not exceed the limits specified below:

Total Suspended Particulates	170.2 lbs/hr	166.5 tons/yr
Particulate Matter (PM-10)	85.6 lbs/hr	83.3 tons/yr

(Condition #210 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

191. Emissions from the operation of the Area 11 centrifuges (Ref. No. DC-25), shall not exceed the limits specified below:

Total Suspended Particulates	0.35 lbs/hr	1.2 tons/yr
Particulate Matter (PM-10)	0.35 lbs/hr	1.2 tons/yr
Volatile Organic Compounds (VOC)	2.7 lbs/hr	9.0 tons/yr

(Condition #211 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

192. Emissions from the operation of Area 11, the Ammonium Sulfate Production Area shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	30.0 lbs/hr	67.0 tons/yr

(Condition #213 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

193. Fugitive emissions from the operation of the Ammonium Sulfate Handling and Loading operation including the emissions from the outdoor storage pad operation shall not exceed the limits specified below:

Total Suspended Particulates	173 lbs/hr	178.9 tons/yr
Particulate Matter (PM-10)	87 lbs/hr	89.5 tons/yr

(Condition #214 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

194. Visible Emissions from the Area 11 ammonium sulfate dryer RD-4 vent stacks (DC-11) shall not exceed 15 percent opacity as determined by EPA Method 9. (Reference: 40 CFR, Part 60, Appendix A)
(40 CFR 60.422, Condition #197 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

195. Visible Emissions from the Area 11 ammonium sulfate dryer RD-6 vent stacks (DC-12) shall not exceed 15

percent opacity as determined by EPA Method 9. (Reference: 40 CFR, Part 60, Appendix A)
(40 CFR 60.422, Condition #198 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

196. Visible emissions from the operation of the BLDG.-12 Ammonium Sulfate Storage and Screening operation designated Stack number DC-21 shall not exceed 20 percent opacity except for one six minute period in any one hour of not more than 60 percent opacity.
(Condition #206 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

197. Visible emissions from the operation of the Area 11 centrifuges designated Stack number DC-25 shall not exceed 20 percent opacity except for one six minute period in any one hour of not more than 30 percent opacity.
(Condition #212 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

198. Visible emissions from the operation of the BLDG.-12 Ammonium Sulfate Storage and Screening operation designated Stack number DC-31 shall not exceed 20 percent opacity except for one six minute period in any one hour of not more than 30 percent opacity.
(Condition #208 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

199. Excluding the equipment referenced in Conditions #194-198, no owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater that 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-80-110 and 9 VAC 5-50-80 of State Regulations)

J. Area 11 Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Monitoring

200. The permittee shall maintain devices which measure the scrubber liquid flow rate and the total pressure drop across the Ducon wet scrubber (DC-7) controlling emissiosn from the rotary dryer RD-3.
(Condition #177 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

201. The permittee shall install, calibrate and maintain monitoring devices which continuously measure and permanently record the scrubber liquid flow rate for the wet scrubber and the total pressure drop across the scrubber/mist eliminator (DC-11) controlling emissions from the rotary dryer, RD-4. The permittee shall maintain the total pressure drop and the scrubber liquid flow rate for DC-11 necessary to demonstrate compliance with the requirements of Condition #166.
(40 CFR 60.423(b), Condition #178 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

202. The permittee shall install, calibrate and maintain monitoring devices which continuously measure and permanently record the scrubber liquid flow rate and the total pressure drop across the Mechanical scrubber/mist eliminator (DC-12) controlling emissions from the rotary dryer, RD-6. The permittee shall maintain the total pressure drop and the scrubber liquid flow rate for DC-12 necessary to demonstrate compliance with the requirements of Condition #167.
(40 CFR 60.423(b), Condition #179 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

203. The permittee shall maintain devices which measure the scrubber liquid flow rate and the total pressure drop across the wet scrubber (DC-29) controlling emissions from the rotary dryer, RD-7.
(Condition #180 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

204. Honeywell shall install, calibrate, maintain and operate a flow monitoring device or weight scale that can be used to determine the mass flow rate of the Ammonium Sulfate production from the Dryer process. The monitoring device will have an accuracy of plus or minus five percent (±5%) over its range. The device will be provided with adequate access for inspection.
(40 CFR 60.423(a), Condition #182 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

205. The permittee shall install, calibrate and maintain monitoring devices which continuously measure and permanently record the scrubber liquid flow rate and the total pressure drop across the wet cyclone scrubber (DC-25) controlling emissions from the Area 11 centrifuges, DC-25.
(Condition #181 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

206. The permittee shall install, calibrate and maintain monitoring devices which continuously measure the scrubber liquid flow rate and the total pressure drop across the wet scrubber (DC-21) controlling emissions from the BLDG 12 Ammonium Sulfate Storage and Loading Operation, the three (3) triple deck screens and the mid-grade conveyor (Ref. No. SC-65, SC-66, SC-67, CO-225).
(Condition #183 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

207. The permittee shall maintain a device to continuously monitor the differential pressure across the baghouse controlling emissions from the BLDG 12 Ammonium Sulfate Storage and Loading Operation, the ammonium sulfate bulk storage bin/loading station, the bulk storage bin conveyor and the bulk storage bin elevator (Ref. No. EL-25).
(Condition #184 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

208. The permittee shall monitor and record the amount of Dustrol anti-caking agent (or equivalent) applied to demonstrate compliance with the control requirements of Condition #172.
(9 VAC 5-80-110 of State Regulations)

209. Each emission unit subject to Conditions #194-199, including RD-3, RD-4, RD-6, RD-7, DC-21, DC-25, and DC-31, shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110 of State Regulations)

Recordkeeping

210. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

a. The annual production of Ammonium Sulfate, calculated monthly as the sum of each previous consecutive 12 month period.

b. The annual throughput of ammonium sulfate for each operation subject a throughput limit in Conditions #173-179, calculated monthly as the sum of each previous consecutive 12 month period.

c. The maximum hourly production capacity of Ammonium Sulfate through each dryer.

d. The annual production of Standard Ammonium Sulfate and the annual production of Granular Ammonium Sulfate in tons.

e. The annual total Natural Gas usage, in thousands of standard cubic feet, by the Ammonium Sulfate dryers.

f. Emission factors and any other information necessary to demonstrate compliance with the emission limits of Conditions #182-193.

g. Copies of all initial performance tests performed on RD-4, RD-6, DC-25, and DC-31. Copies of all Visible Emissions Evaluations performed on each of these units. Copies of notifications of the begin actual construction date for modifications performed on EV-9, EV-26, and EV-29.

h. The date on which the operation of the outdoor storage pad system begins, an estimate of the amount of material stored at the pad, the number of truck deliveries to the pad system and the date on which installation of a covering system began. The source will also maintain on the premises a copy of the Best Management Practices for Pile operation as agreed to by DEQ and Honeywell.

i. The annual percentage of time that the Dustrol (or equivalent) anti-caking agent application system was in operation, calculated monthly as the sum of each previous consecutive 12 month period.

j. The results of the monthly visible emission surveys required by Condition #209 and details of any corrective action taken as a result of these inspections.

k. Scheduled and unscheduled maintenance records for all process equipment and air pollution control equipment.

l. Inventory of spare parts to minimize durations of air pollution control equipment breakdowns.

m. Written operating procedures for all process equipment and air pollution control equipment.

n. Operator training records.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(Condition #217 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Reporting

211. The permittee shall report the results of any 40 CFR Part 60 method 9 opacity test performed as a result of Condition #209. If the test indicates the facility is out of compliance with any standard contained in Conditions #194-199, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E.
(9 VAC 5-80-110 of State Regulations)

K. Area 13 Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Control Equipment Requirements

212. Particulate emissions from the Adipic Acid Warehouse shall be controlled by the Ducon Venturi Scrubber (Ref. No. DC-28). The scrubber shall be provided with adequate access for inspection.
(Condition #218 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

213. Particulate emissions from the Adipic Acid Fluid Bed Dryer (Ref. No. D-52) and the Adipic Acid Storage Bins (Ref. Nos. BN-1 and BN-3) shall be controlled by a Ducon venturi scrubber (Ref. No. DC-27). The scrubber shall have a particulate removal efficiency of at least 99%. The scrubber shall be provided with adequate access for inspection.
(Condition #219 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

214. Particulate emissions from the Adipic Acid Storage Bin (Ref. No. BN-7) shall be controlled by a Torit baghouse (Ref. No. BH-4). The baghouse shall be provided with adequate access for inspection.
(Condition #220 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

215. Fugitive VOC emissions resulting from equipment leaks in Area 13 shall be controlled through a Leak Detection and Repair (LDAR) program in accordance with the requirements specified in 40 CFR 60, Subpart VV.
(40 CFR 60 Subpart VV and 9 VAC 5-80-110 of State Regulations)

NSPS NNN/RRR Requirements

216. The following Area 13 affected facilities subject to NSPS Subparts NNN or RRR shall be operated in compliance with the requirements of 40 CFR 60.662(c)/60.702(c) as specified below:

a. The following equipment shall be operated such that their vent streams shall each maintain a Total

Resource Effectiveness (TRE; as defined in 40 CFR 60 Subparts NNN/RRR) value of greater than 1.0 without the use of a VOC control device at all times: VT-845, VT-846 and CL-5.

(40 CFR 60 Subparts NNN and RRR and 9 VAC 5-80-110 of State Regulations)

217. The permittee shall operate VT-845, VT-846 and CL-5 in compliance with New Source Performance Standards, Subparts NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations) or RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes), as appropriate.
(40 CFR 60 Subpart NNN/RRR and 9 VAC 5-80-110 of State Regulations)

Throughput Limits

218. The yearly throughput of adipic acid shall not exceed 5,814.4 Area 13 production units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #221 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limitations

219. Emissions from the operation of the adipic acid fluid bed dryer (Ref. No. D-52) shall not exceed the limitations specified below:

Total Suspended Particulates	1.2 lbs/hr	2.6 tons/yr
Particulate Matter PM_{10}	1.2 lbs/hr	2.6 tons/yr

(Condition #222 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

220. Emissions from the operation of the adipic acid production facility* shall not exceed the limitations specified below:

Total Suspended Particulate	5.6 lbs/hr	14.5 tons/yr
Particulate Matter PM_{10}	5.6 lbs/hr	14.5 tons/yr
Nitrogen Oxides (as NO_2)	274 lbs/hr	4.1 tons/yr

*Total emissions from the adipic acid production facility shall be calculated by summing the emissions from Adipic Acid Storage, Adipic Acid Bulk Truck Loading, Adipic Acid Packout/Warehouse, BN-7, C-391, Adipic Acid Centrifuges, Adipic Acid Crystallizers, D-52 and the Adipic Acid Bleed Evaporator.
(Condition #223 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

221. Visible emissions from the Adipic Acid Production facility shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(Condition #224 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

L. Area 13 Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Monitoring

222. The Ducon venturi scrubber (DC-28) shall be equipped with a device which continuously measures the total pressure drop across the scrubber.
(9 VAC 5-80-110 of State Regulations)

223. The Ducon venturi scrubber (DC-27) shall be equipped with a device which continuously measures the total pressure drop across the scrubber. The permittee shall maintain the total pressure drop for DC-27 necessary to demonstrate compliance with the requirements of Condition #213.
(Condition #219 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

224. The Torit baghouse (BH-4) shall be equipped with a device which continuously measures the total pressure drop across the baghouse.
(9 VAC 5-80-110 of State Regulations)

225. The permittee shall perform an initial performance test and determine an initial process vent stream TRE (as defined in 40 CFR 60 Subparts NNN/RRR) value for VT-845, VT-846 and CL-5. The Net Heating Value, the Emission Rate of Volatile Organic Compounds, and the TRE (as defined in 40 CFR 60 Subparts NNN/RRR) of the process vent streams for the above units shall be determined and calculated as defined in New Source Performance Standards, Subparts NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations) or RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes), as appropriate.
(40 CFR 60 Subpart NNN/RRR and 9 VAC 5-80-110 of State Regulations)

226. The permittee shall recalculate the TRE (as defined in 40 CFR 60 Subparts NNN/RRR) index value for VT-845, VT-846 and CL-5 whenever process changes are made. The TRE (as defined in 40 CFR 60 Subparts NNN/RRR) index value shall be recalculated based on test data or on best engineering estimates of the effects of the change on the recovery system.
(40 CFR 60 Subpart NNN/RRR and 9 VAC 5-80-110 of State Regulations)

227. Where the TRE (as defined in 40 CFR 60 Subparts NNN/RRR) value, calculated in accordance with Conditions #225 and #226 above, is less than or equal to 1.0, the source shall conduct a performance test consistent with the requirements of 40 CFR Part 60.664 (g)(1), New Source Performance Standards, Subpart NNN (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations) or 40 CFR Part 60.704 (f)(1), New Source Performance Standards, Subpart RRR (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes), as appropriate. This performance test shall be conducted as soon as possible but in no case later than 180 days after the process change prompting the recalculation.
(40 CFR 60 Subpart NNN/RRR and 9 VAC 5-80-110 of State Regulations)

228. Where the TRE (as defined in 40 CFR 60 Subparts NNN/RRR) value, calculated in accordance with Conditions #225 and #226 above, is less than or equal to 8.0 but greater than 1.0, the source shall conduct a performance test consistent with 40 CFR 60.664(g)(2), Subpart NNN or 40 CFR Part 60.704(f)(2), Subpart RRR. This performance test must be conducted as soon as possible but in no case later than 180 days after the process change prompting the recalculation. All performance tests conducted in accordance with this condition shall be conducted within 180 days of the process change.
(40 CFR 60 Subpart NNN/RRR and 9 VAC 5-80-110 of State Regulations)

229. Each emission unit subject to Condition #221, including but not limited to D-52, BN-3, BN-1, BN-7, C-391 and the Adipic Acid Warehouse (AA WH) shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have any visible emissions (does not include

condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having any visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110 of State Regulations)

Recordkeeping

230. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

a. The yearly production of adipic acid from Area 13, calculated monthly as the sum of each previous consecutive 12 month period.

b. The annual emissions of each pollutant listed in Conditions #219 and #220 from D-52 and Area 13 as a whole, calculated monthly as the sum of each previous consecutive 12 month period. Also, emission factors and any other information necessary to demonstrate compliance with the emission limits of Conditions #219-220.

c. Differential pressure monitoring records for DC-27, DC-28 and BH-4.

d. For CL-5:

i. Any changes in production capacity, feedstock type, or catalyst type, or any replacement, removal or addition of recovery equipment or a distillation unit;
ii. Any calculation or recalculation of the TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index value performed pursuant to 40 CFR 60.664(f) or 40 CFR 60.664(g); and
iii. The results of the initial performance test and any subsequent performance tests performed pursuant to the methods and procedures required by 40 CFR 60.664(e).

e. For VT-845 and VT-846:

i. Any changes in production capacity, feedstock type, or catalyst type, or any replacement, removal or addition of recovery equipment or reactors;
ii. Any recalculation of the TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index value performed pursuant to 40 CFR 60.704(f);
iii. The results of the initial performance test and any subsequent performance tests performed pursuant to the methods and procedures required by 40 CFR 60.704(d); and
iv. The initial test for determining the TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index and the results of the initial TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index calculation.

f. Leak detection and repair records required by 40 CFR 60.486.
(40 CFR 60.486)

g. The results of the monthly visible emission surveys required by Condition #229 and details of any corrective action taken as a result of these inspections.

h. Scheduled and unscheduled maintenance records for all process equipment and air pollution

control equipment.

i. Inventory of spare parts to minimize durations of air pollution control equipment breakdowns.

j. Written operating procedures for all process equipment and air pollution control equipment.

k. Operator training records.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(40 CFR 60 Subpart VV/NNN/RRR and 9 VAC 5-80-110 of State Regulations)

Reporting

231. The permittee shall furnish written notification to the Director, Piedmont Regional Office of:

a. For VT-845 and VT-846, any recalculation of the TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index value as recorded under 40 CFR 60.705(g) reported semiannually in accordance 40 CFR 60.705(l).

b. For CI-5, any recalculation of the TRE (as defined in 40 CFR 60 Subpart NNN/RRR) index value as recorded under 40 CFR 60.665(h) reported semiannually in accordance 40 CFR 60.665(l).

c. For CI-5, VT-845 and VT-846, where any TRE value calculated in accordance with Conditions #225 or #226 is less than or equal to 1.0, the permittee shall notify the Director, Piedmont Regional Office, within a week of that determination.

d. For Area 13, semi-annual LDAR reports containing the information specified in 40 CFR 60.487.

Copies of written notifications required by subsections (a-d) of this condition are to be sent to:

Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(40 CFR 60 Subpart VV/NNN/RRR and 9 VAC 5-80-110 of State Regulations)

232. The permittee shall report the results of any 40 CFR Part 60 method 9 opacity test performed as a result of Condition #229. If the test indicates the facility is out of compliance with the standard contained in Condition #221, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E.
(9 VAC 5-80-110 of State Regulations)

M. SAP Plant Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Control Equipment Requirements

233. The sulfur dioxide emissions from the Sulfuric Acid Plant Stack (Ref. No. SK-1) shall be controlled by the sulfite scrubber (ref. No. TW-38). The permittee shall operate the Sulfite Scrubber in a manner consistent with the emission limits in Condition #239. The scrubber shall be provided with adequate access for inspection.
(Condition #225 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

234. Particulate emissions from the Sulfuric Acid Plant Stack (Ref. No. SK-1) shall be controlled by the Brinks mist eliminator (Ref. No. SE-105). The mist eliminator shall be provided with adequate access for inspection.
(Condition #226 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Throughput Limits

235. The annual input of sulfur to the Sulfuric Acid Plant (SAP) shall not exceed 1,373.6 sulfuric acid production input units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #227 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limitations

236. The emission rate of sulfur dioxide from the operation of the Sulfuric Acid Plant (SAP), Stack Vent number SK-1, shall not exceed a mass emission rate of 4 pounds per ton of 100% sulfuric acid produced.
(40 CFR 60.82, Condition #228 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

237. The emission rate of sulfuric acid mist from the SAP Plant (Ref. No. SK-1) shall not exceed 0.15 pounds per ton of 100% sulfuric acid produced.
(40 CFR 60.83(a)(1), Condition #229 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

238. Visible Emissions from the SAP Plant Vent Stack (Ref. No. SK-1) shall not exceed ten percent (10%) opacity as determined by EPA Method 9. (Reference: 40 CFR, Part 60, Appendix A)
(40 CFR 60.83(a)(2), Condition #230 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

239. Emissions from the operation of the SAP Plant Vent Stack (Ref. No. SK-1), shall not exceed the limits specified below:

Total Suspended Particulates	2.2 lbs/hr	8.2 tons/year
Particulate Matter (PM-10)	2.2 lbs/hr	8.2 tons/year
Sulfur Dioxide	264.0 lbs/hr	200.0 tons/year

(Condition #231 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

N. SAP Plant Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Monitoring

240. Honeywell shall install, calibrate, maintain and operate a continuous emission monitoring and recording system (CEMS) for the purpose of continuously monitoring Sulfur Dioxide emissions from the Sulfuric Acid Plant, Stack Vent number SK-1. The Sulfur Dioxide CEMS shall meet the requirements of 40 CFR 60.84(a) and 40 CFR 60, Appendix F. The permittee shall establish a conversion factor for the purpose of converting the monitoring data into the units required by Condition #236. The conversion factor shall be determined, as a minimum, three times daily in accordance with the procedures of 40 CFR 60.84(b).
(40 CFR 60.84, Condition #232 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

241. The Brinks mist eliminator (SE-105) used to control particulate emissions from the sulfuric acid plant shall be equipped with a device to continuously measure the differential pressure through the mist eliminator. (Condition #226 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

242. Each emission unit subject to Condition #238, including SK-1, shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded
(9 VAC 5-80-110 of State Regulations)

Recordkeeping

243. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

a. The annual input of sulfur to the Sulfuric Acid Plant, calculated monthly as the sum of each previous consecutive 12 month period.

a. Records of all conversion factors required by Condition #240 and the values from which they were computed.

b. Emission factors, CEM data and any other information necessary to demonstrate compliance with the emission limits of Condition #239.

c. The results of the monthly visible emission surveys required by Condition #242 and details of any corrective action taken as a result of these inspections.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(40 CFR 60.84(c) and 9 VAC 5-80-110 of State Regulations)

Reporting

244. The permittee shall submit excess emission reports for the CEMS on the Sulfuric Acid Plant Vent Stack (SK-1) to the director, Piedmont Regional Office within 30 days after the end of each calendar quarter. The periods of excess emissions are defined as any 3 hour period (or arithmetic average of three consecutive one-hour periods) where the integrated average sulfur dioxide emissions exceeds the standards defined in Condition #236 above. Each quarterly excess emission report shall contain, at a minimum, the dates included in the calendar quarter and the following (additional details of the quarterly reports are to be arranged with the Director, Piedmont Regional Office):

a. A statement of the specific times when the 3 hour rolling average exceed the standard for SO_2, the actual average at the time of the exceedance and the cause for the excess emissions.

b. A log of the CEM downtime containing the date the monitor is unavailable, the beginning and ending times of the monitor downtime, a description of the problem, cause of the problem and the necessary corrective action to bring the monitor back into service.

c. The date and results of the last Relative Accuracy Test Audit or Cylinder Gas Audit.

d. A log of CEMS performance.

e. The number of hours the SAP plant operated during the quarter.

At a minimum, all one hour averages shall be available on site at all times and shall be accessible for inspection by DEQ and shall be current for the most recent five (5) years.
(Condition #233 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

245. The permittee shall report the results of any 40 CFR Part 60 method 9 opacity test performed as a result of Condition #242. If the test indicates the facility is out of compliance with the standard contained in Condition #238, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E.
(9 VAC 5-80-110 of State Regulations)

O. Kellogg Plant Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Control Equipment Requirements

246. Nitrogen oxide emissions from the Kellogg Ammonia Plant Primary Reformer (Ref. No. FU-1) shall be controlled by operation of compressor GC-11 such that the low pressure purge from the Ammonia Synthesis Loop is recovered to the Cryogenics Unit in Area 6. The low pressure purge flow to the Cryogenics Unit shall be maintained at all times, except during start-up, shutdown, or malfunction. The compressor shall be provided with adequate access for inspection.
(Condition #234 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

247. The Kellogg primary reformer shall be operated at all times with compressor GC-11 operating except during periods of start-up, shutdown or malfunction.
(Condition #235 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

248. The Kellogg Supplemental Cooling Tower for the Kellogg Ammonia Plant shall use no chromium based water treatment chemicals. Chromium based water treatment chemicals shall have the meaning given them in 63.401 of the 40 CFR Part 63.
(Condition #236 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Throughput Limits

249. The annual input of Natural Gas and Area-6 recovered gas as Fuel to the M. W. Kellogg Ammonia Plant shall not exceed 607,560 Kellogg gas input units (based on 1000 BTU per standard cubic feet), calculated monthly as the sum of each previous consecutive 12 month period. The annual input of landfill gas as Fuel to the M. W. Kellogg Ammonia Plant shall not exceed 196,391 Kellogg gas input units (based on 526 BTU per standard cubic feet), calculated monthly as the sum of each previous consecutive 12 month period. The total heat input to the M. W. Kellogg Ammonia Plant from all fuels shall not exceed 812,250 Kellogg heat input units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #237 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

250. The annual input of Natural Gas as a Reactant for use in the ammonia production process at the M. W. Kellogg Ammonia Plant shall not exceed 1,070,700 Kellogg gas input units (based on 1000 BTU per standard cubic feet), calculated monthly as the sum of each previous consecutive 12 month period. (Condition #238 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

251. The annual emission rate of vented gas from VT-418, the carbon dioxide vent from the carbon dioxide scrubber towers in the Kellogg Ammonia Production facility shall not exceed 100,000 tons of vented gas per year, calculated monthly as the sum of each previous consecutive 12 month period. (Condition #239 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limitations

252. Emissions from the operation of the M. W. Kellogg Ammonia Plant Primary Reformer (Ref. No. FU-1) shall not exceed the limits specified below:

Total Suspended Particulates	11.7 lbs/hr	45.8 tons/yr
Particulate Matter (PM-10)	11.7 lbs/hr	45.8 tons/yr
Sulfur Dioxide	2.6 lbs/hr	11.2 tons/yr
Nitrogen Oxides (as NO_2)	517.0 lbs/hr	552.6 tons/yr
Carbon Monoxide	38.3 lbs/hr	146.0 tons/yr
Volatile Organic Compounds (VOC)	1.3 lbs/hr	5.2 tons/yr
Hydrogen Chloride	1.1 lbs/hr	4.6 tons/yr

(Condition #240 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

253. Emissions from the operation of the M. W. Kellogg Ammonia Plant Primary Reformer Cooling Tower (CLT-1) shall not exceed the limits specified below:

Particulate Matter	0.6 lbs/hr	2.7 tons/yr
PM-10	0.6 lbs/hr	2.7 tons/yr

(Condition #240 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

254. Emissions from the operation of the M. W. Kellogg Ammonia Plant carbon dioxide vent from the carbon dioxide scrubber towers (Ref. No. VT-418) shall not exceed the limits specified below:

Carbon Monoxide	154.0 lbs/hr	83.3 tons/yr
Volatile Organic Compounds (VOC)	23.3 lbs/hr	7.3 tons/yr
Methanol	23.3 lbs/hr	7.3 tons/yr

(Condition #241 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

255. Emissions from the operation of the M. W. Kellogg Ammonia Plant Carbon Desulfurization drum (Ref. No. CD-1) shall not exceed the limits specified below:

Carbon Monoxide	6600.0 lbs/hr
Volatile Organic Compounds (VOC)	3450.0 lbs/hr

(Condition #242 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

256. Combined emissions from the operation of the M. W. Kellogg Ammonia Plant Process Condensate collection vents (Ref. No. VT-882 and HT-241) shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	0.9 lbs/hr	3.3 tons/yr
Methanol	0.9 lbs/hr	3.3 tons/yr

(Condition #243 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

257. No owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater that 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-80-110 and 9 VAC 5-50-80 of State Regulations)

P. Kellogg Plant Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Monitoring

258. Each emission unit subject to Condition #257, including the Kellogg Primary Reformer FU-1, shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110 of State Regulations)

259. The Kellogg purge gas compressor (GC-11) shall be equipped with a device to continuously measure the pressure of the purge stream at the inlet to the compressor.
(Condition #234 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Recordkeeping

260. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

a. The yearly production of Ammonia from the Kellogg Ammonia production facility, calculated monthly as the sum of each previous consecutive 12 month period.

b. The maximum hourly production rate of Ammonia from the Kellogg Ammonia Production facility.

c. The date of any emissions from CD-1 and the number of hours these emissions occurred.

d. The annual total Natural Gas and Area 6 recovered gas usage, in thousands of standard cubic feet, by the Kellogg Ammonia production facility as both reactant and fuel.

e. The annual landfill gas usage, in thousands of standard cubic feet, by the Kellogg Ammonia production facility as fuel.

f. The annual total heat input, in dekatherms, to the Kellogg Ammonia production facility from all fuels.

g. Annual measurements of the landfill gas sulfur and chloride compound content.

h. The annual emission of NOx from the Kellogg Primary Reformer (FU-1), calculated monthly as the sum of each previous consecutive 12 month period.

i. Emission factors and any other information necessary to demonstrate compliance with the

emission limits of Conditions #252-256.

j. Records of the number of hours that FU-1 is in service and CD-11 is not operating during periods of start-up, shutdown and malfunction.

k. The results of the monthly visible emission surveys required by Condition #258 and details of any corrective action taken as a result of these inspections.

l. Scheduled and unscheduled maintenance records for all process equipment and air pollution control equipment.

m. Inventory of spare parts to minimize duration of air pollution control equipment breakdowns.

n. Written operating procedures for all process equipment and air pollution control equipment.

o. Operator training records.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(Condition #245 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Reporting

261. The permittee shall furnish written notification to the Director, Piedmont Regional of:

a. The actual date on which construction of the forced draft fan (101BJ) of the primary reformer commenced within 10 days after such date.

b. The anticipated start-up date of the forced draft fan (101BJ) of the primary reformer postmarked not more than 60 days nor less than thirty (30) days prior to such date.

c. The actual start-up date of the forced draft fan (101BJ) of the primary reformer within 10 days after such date.

(Condition #244 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

262. The permittee shall report the results of any 40 CFR Part 60 method 9 opacity test performed as a result of Condition #258. If the test indicates the facility is out of compliance with the standard contained in Condition #257, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E. (9 VAC 5-80-110 of State Regulations)

Q. Girdler Plant Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Control Equipment Requirements

263. VOC emissions from the Natural Gas Desulfurization Drums (CD-3 and CD-4) shall be controlled by the use of non-regenerative adsorbent or an equivalent technology. The Desulfurization Drums shall be provided with adequate access for inspection.
(Condition #E.6 of the 3/26/1997 RACT Agreement and 9 VAC 5-80-110 of State Regulations)

Throughput Limits

264. The annual input of Natural Gas as Fuel to the Girdler Synthesis Gas Plant shall not exceed 318,313.8 Girdler gas input units (@1000 BTU/standard cubic foot), calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #246 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

265. The annual input of Natural Gas as a Reactant for use in the synthesis gas production process at the Girdler Synthesis Gas Plant shall not exceed 676,053 Girdler gas input units (@1000 BTU/standard cubic foot), calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #247 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limitations

266. Emissions from the operation of the Girdler Synthesis Gas Plant Primary Reformer, (Ref. No. FU-6) shall not exceed the limits specified below:

Total Suspended Particulates	1.2 lbs/hr	4.9 tons/yr
Particulate Matter (PM-10)	1.2 lbs/hr	4.9 tons/yr
Sulfur Dioxide	0.1 lbs/hr	0.2 tons/yr
Nitrogen Oxides (as NO_2)	20.7 lbs/hr	81.2 tons/yr
Carbon Monoxide	3.8 lbs/hr	14.4 tons/yr
Volatile Organic Compounds (VOC)	0.3 lbs/hr	1.0 tons/yr

(Condition #248 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

267. Emissions from the operation of the Girdler Synthesis Gas Plant Desulfurization Carbon Drums (Ref. Nos. CD-3,4) shall not exceed the limits specified below:

Carbon Monoxide	2580.0 lbs/hr	12.0 tons/yr
Volatile Organic Compounds (VOC)	1350.0 lbs/hr	6.0 tons/yr

(Condition #249 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

268. No owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater that 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-80-110 and 9 VAC 5-50-80 of State Regulations)

R. Girdler Monitoring, Recordkeeping and Reporting (Periodic Monitoring) - the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Monitoring

269. Each emission unit subject to Condition #268, including the Girdler Primary Reformer FU-6, shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110 of State Regulations)

Recordkeeping

270. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

a. The yearly production of synthesis gas from the Girdler Synthesis Gas Plant, calculated monthly as the sum of each previous consecutive 12 month period.

b. The maximum hourly production rate of synthesis gas from the Girdler Synthesis Gas Plant.

c. For CD-3 and CD-4, the adsorbent replacement dates and periods of usage.

d. The monthly and annual natural gas usage, in thousands of standard cubic feet, by the Girdler Synthesis Gas Plant as both reactant and fuel. The annual usage shall be calculated monthly as the sum of each previous consecutive 12 month period.

e. The annual emissions of each pollutant listed in Conditions #266-267 from FU-6, CD-3 and CD-4, calculated monthly as the sum of each previous consecutive 12 month period.

f. Emission factors and any other information necessary to demonstrate compliance with the emission limits of Conditions #266-267.

g. The results of the monthly visible emission surveys required by Condition #269 and details of any corrective action taken as a result of these inspections.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(9 VAC 5-80-110 of State Regulations)

Reporting

271. The permittee shall report the results of any 40 CFR Part 60 method 9 opacity test performed as a result of Condition #269. If the test indicates the facility is out of compliance with the standard contained in Condition #268, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E. (9 VAC 5-80-110 of State Regulations)

S. Powerhouse Boiler Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

NOx Budget Permit Limitations

272. A review of the air emission units included in this permit approval has determined that the equipment listed in the following table meets the definition of a NO_x Budget Unit and falls subject to the NO_x Budget emission limitations under 9 VAC 5-140-40 or for opt-in sources 9 VAC 5-140-800. As required by 9 VAC 5-140-200 A, each NO_x Budget source is required to have a federally enforceable permit. This section of this Title V permit represents the NO_x Budget permit.
(9 VAC 5-140-40) or (9 VAC 5-140-800)

273. The NO_x Budget permit will be administrated by the VADEQ under the authority of 9 VAC 5-80-360 et seq., and 9 VAC 5-140-10 et seq.
(9 VAC 5-140-200 A)

274. The following air emission unit have been determined to meet the applicability requirements as provided in 9 VAC 5-140-40 A.1 and A.2. Units that do not meet this definition, are not defined as 25-Ton Exemption Units and are not permanently shutdown can be included in the NO_x Budget Trading program as "opt-in" air emission sources.
(9 VAC 5-140-40 A) for Opt-In sources (9 VAC 5-140-800).

Table XII – 1
Facility NO_x Budget Units

Facility Unit ID	Unit NATS Code	Unit Name and description	Maximum Heat Capacity (MMBtu/hr)	Maximum Generation Capacity (megawatts)
10A	05023200010A	Powerhouse Boiler #7 – waterwall steam boiler	1.1 Powerhouse heat input units/hr	N/A
10B	05023200010B	Powerhouse Boiler #9 – waterwall steam boiler	2.1 Powerhouse heat input units/hr	N/A
10C	05023200010C	Powerhouse Boiler #8 – waterwall steam boiler	1.1 Powerhouse heat input units/hr	N/A

275. This NOx Budget permit became effective on May 31, 2004.
(9 VAC 5-140-240.1)

276. Continuous Monitoring requirements.

a. The owners and operators and, to the extent applicable, the NO_X authorized account

representative of each NO_X Budget source and each NO_X Budget unit at the source shall comply with the monitoring requirements of 9 VAC 5-140-700 et seq.
(9 VAC 5-140-60 B.1)

b. The emissions measurements recorded and reported in accordance with (9 VAC 5-140-700 et seq.) (subparts H of 40 CFR 75 and 40 CFR 97) shall be used to determine compliance by the unit with the NO_x Budget emissions limitation under Conditions 14.a through 14.h of this permit.

(9 VAC 5-140-60 B.2)

277. Nitrogen oxides requirements.

a. The owners and operators of each NO_x Budget source and each NO_x Budget unit at the source shall hold NO_x allowances available for compliance deductions under 9 VAC 5-140-540 A, B, E, or F, as of the NO_x allowance transfer deadline, in the unit's compliance account and the source's overdraft account in an amount not less than the total NO_x emissions for the control period from the unit, as determined in accordance with Article 8 (9 VAC 5-140-700 et seq.), plus any amount necessary to account for actual utilization under 9 VAC 5-140-420 E for the control period or to account for excess emissions for a prior control period under 9 VAC 5-140-540 D or to account for withdrawal from the NO_x Budget Trading Program, or a change in regulatory status, of a NO_x Budget opt-in unit under 9 VAC 5-140-860 or 9 VAC 5-140-870.
(9 VAC 5-140-60 C.1)

b. Each ton of nitrogen oxides emitted in excess of the NO_x Budget emissions limitation shall constitute a separate violation of the Clean Air Act, and applicable Virginia Air Pollution Control law.
(9 VAC 5-140-60 C.2)

c. A NO_x Budget unit shall be subject to the requirements under 9 VAC 5-140-60 C.1 starting on the later of May 31 2004 or the date on which the unit commences operation.
(9 VAC 5-140-60 C.3)

d. NO_x allowances shall be held in, deducted from, or transferred among NO_x Allowance Tracking System accounts in accordance with 9 VAC 5-140-400 et seq., 9 VAC 5-140-500 et seq., 9 VAC 5-140-600 et seq., and 9 VAC 5-140-800 et seq..
(9 VAC 5-140-60 C.4)

e. A NO_X allowance shall not be deducted, in order to comply with the requirements under 9 VAC 5-140-60 C.1 for a control period in a year prior to the year for which the NO_X allowance was allocated.
(9 VAC 5-140-60 C.5)

f. A NO_X allowance allocated by the permitting authority or the administrator under the NO_X Budget Trading Program is a limited authorization to emit one ton of nitrogen oxides in accordance with the NO_X Budget Trading Program. No provision of the NO_X Budget Trading Program, the NO_X Budget permit application, the NO_X Budget permit, or an exemption under 9 VAC 5-140-50 and no provision of law shall be construed to limit the authority of the United States or the State to terminate or limit such authorization.
(9 VAC 5-140-60 C.6)

g. A NO_x allowance allocated by the permitting authority or the administrator under the NO_x

Budget Trading Program does not constitute a property right.
(9 VAC 5-140-60 C.7)

h. Upon recordation by the administrator under 9 VAC 5-140-500 et seq., 9 VAC 5-140-600 et seq., or 9 VAC 5-140-800 et seq., every allocation, transfer, or deduction of a NO_X allowance to or from a NO_X Budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, any NO_X Budget permit of the NO_X Budget unit by operation of law without any further review.
(9 VAC 5-140-60 C.8)

278. The owners and operators of a NO_x Budget unit that has excess emissions in any control period shall:

1. Surrender the NO_X allowances required for deduction under 9 VAC 5-140-540 D 1; and

2. Pay any fine, penalty, or assessment or comply with any other remedy imposed under 9 VAC 5-140-540 D 3.

(9 VAC 5-140-60 D)

NOx Budget Recordkeeping and Reporting Requirements.

The following requirements concerning recordkeeping and reporting shall apply:

279. Unless otherwise provided, the owners and operators of the NO_X Budget source and each NO_X Budget unit at the source shall keep on site at the source each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the permitting authority or the administrator.
(9 VAC 5-140-60 E.1)

a. The account certificate of representation for the NO_X authorized account representative for the source and each NO_X Budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 9 VAC 5-140-130; provided that the certificate and documents shall be retained on site at the source beyond such five-year period until such documents are superseded because of the submission of a new account certificate of representation changing the NO_X authorized account representative.
(9 VAC 5-140-60 E.1)

b. All emissions monitoring information, in accordance with 9 VAC 5-140-700 et seq. of this part; provided that to the extent that 9 VAC 5-140-700 et seq. provides for a three-year period for recordkeeping, the three-year period shall apply.
(9 VAC 5-140-60 E.1)

c. Copies of all reports, compliance certifications, and other submissions and all records made or required under the NO_X Budget Trading Program.
(9 VAC 5-140-60 E.1)

d. Copies of all documents used to complete a NO_X Budget permit application and any other submission under the NO_X Budget Trading Program or to demonstrate compliance with the requirements of the NO_X Budget Trading Program.
(9 VAC 5-140-60 E.1)

280. The NO_X authorized account representative of a NO_X Budget source and each NO_X Budget unit at the source shall submit the reports and compliance certifications required under the NO_X Budget Trading Program, including those under 9 VAC 5-140-300 et seq., 9 VAC 5-140-700 et seq., or 9 VAC 5-140-800 et seq.
(9 VAC 5-140-60 E.2)

281. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports will be provided at the appropriate locations.
(9 VAC 5-50-30 and 9 VAC 5-140-710)

282. Any person who knowingly violates any requirement or prohibition of the NOx Budget Trading Program, a NO_x Budget permit, or an exemption under 9 VAC 5-140-50 shall be subject to enforcement pursuant to applicable State or Federal law.
(9 VAC 5-140-60 F.1)

283. Any person who knowingly makes a false material statement in any record, submission, or report under the NO_x Budget Trading Program shall be subject to criminal enforcement pursuant to the applicable State or Federal law.
(9 VAC 5-140-60 F.2)

284. No permit revision shall excuse any violation of the requirements of the NO_x Budget Trading Program that occurs prior to the date that the revision takes effect.
(9 VAC 5-140-60 F.3)

285. Each NO_x Budget source and each NO_x Budget unit shall meet the requirements of the NO_x Budget Trading Program.
(9 VAC 5-140-60 F.4)

286. Any provision of the NO_x Budget Trading Program that applies to a NO_x Budget source or the NO_x authorized account representative of a NO_x Budget source shall also apply to the owners and operators of such source and of the NO_x Budget units at the source.
(9 VAC 5-140-60 F.5)

287. Any provision of the NO_x Budget Trading Program that applies to a NO_x Budget unit or the NO_x authorized account representative of a NO_x budget unit shall also apply to the owners and operators of such unit. Except with regard to the requirements applicable to units with a common stack under Article 8 (9 VAC 5-140-700 et seq.), the owners and operators and the NO_x authorized account representative of one NO_x Budget unit shall not be liable for any violation by any other NO_x Budget unit of which they are not owners or operators or the NO_x authorized account representative and that is located at a source of which they are not owners or operators or the NO_x authorized account representative.
(9 VAC 5-140-60 F.6)

288. No provision of the NO_x Budget Trading Program, a NO_x Budget permit application, a NO_x Budget permit, or an exemption under 9 VAC 5-140-50 shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the NO_x authorized account representative of a NOx Budget source or NO_x Budget unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.
(9 VAC 5-140-60 G)

Rule 4-8 Existing Source Fuel Burning Emission Limitations

289. Emissions from the Powerhouse Boiler #8 shall not exceed the limits specified below:

Particulate Matter	0.252 pounds per million BTU
Sulfur Dioxide	2.64 pounds per million BTU

(9 VAC 5-80-110, 9 VAC 5-40-900 and 9 VAC 5-40-930 of State Regulations)

290. Visible emissions from Powerhouse Boiler #8 shall not exceed 20% opacity except for one six-minute period in any one hour of not more than 60% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-80-110 and 9 VAC 5-40-940 of State Regulations)

T. Powerhouse Boiler Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Rule 4-8 Existing Source Fuel Burning Monitoring Requirements

291. The permittee shall conduct the following monitoring to determine compliance with the sulfur dioxide emission limit of Condition #289:

a. On each day that the Powerhouse Boiler #8 fires oil, the permittee shall collect and analyze (for sulfur and heat content) an oil sample in an as-fired condition from the boiler in accordance with Method 19 of 40 CFR 60, Appendix A.

b. Alternatively, upon each occasion where a fuel tank (which stores oil for use in Powerhouse Boiler #8) is partially or wholly refilled or filled, the permittee shall collect and analyze (for sulfur and heat content) an oil sample from the fuel tank. Each sample shall be analyzed in accordance with Method 19 of 40 CFR 60, Appendix A.

c. Whenever an oil sample is analyzed in accordance with paragraphs (a) or (b) of this condition, the permittee shall calculate the resulting lb SO2/MMBtu value for the oil sample.

d. If any lb/MMBtu value calculated in accordance with paragraph (c) of this condition exceeds the SO2 standard contained in Condition #289, the permittee shall record the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance.

(9 VAC 5-80-110 of State Regulations)

292. The permittee shall conduct performance tests on Powerhouse Boiler #8 for particulate matter to determine compliance with the particulate matter emission limit contained in Condition #289. The tests shall be performed, and demonstrate compliance at least once during the 5-year term of this permit. The tests shall be repeated at least once during each successive 5-year permit term. Unless otherwise approved by the Director, Piedmont Region, the tests shall be performed between the second and third years of each permit term. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of State Regulations. The details of the tests are to be arranged with the Director, Piedmont Region. The permittee shall submit a test protocol at least 30 days prior to testing. Four copies of the test results shall be submitted to the Director, Piedmont Region within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-110 of State Regulations)

293. Concurrently with each performance test required by Condition #292, Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall also be conducted by the permittee on Powerhouse Boiler #8. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Piedmont Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Should conditions prevent concurrent opacity observations, the Piedmont Regional Office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the performance tests. Two copies of the test result shall be submitted to the Piedmont Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-110 of State Regulations)

294. The permittee shall install and operate a camera and monitor system (CMS) to allow remote visual observation of the Powerhouse Boiler # 8 stack from the Powerhouse control room. The CMS shall be maintained in good working order and operated during all periods of boiler operation. The permitee shall use the CMS to observe visually the powerhouse boiler stack at least every two hours during each operating day to determine if the unit has normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A method 9 visible emissions evaluation is performed on the emissions unit in lieu of an individual two hour observation. Each emissions unit observed having above-normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emissions condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110 of state regulations)

Rule 4-8 Existing Source Fuel Burning Recordkeeping Requirements

295. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

a. the results of the performance tests required by Conditions #292 and #293.

b. the fuel analyses and lb/MMBtu calculations required by Condition #291.

c. any exceedances and any associated corrective action determined in accordance with Condition #291.d.

d. Continuous monitoring system calibrations and calibration checks, percent operating time, and excess emissions.

e. The results of the monthly visible emission surveys required by Condition #294 and details of any corrective action taken as a result of these inspections.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(9 VAC 5-80-110 of State Regulations)

Rule 4-8 Existing Source Fuel Burning Reporting Requirements

296. The permittee shall submit reports to the Piedmont Regional Office, within 30 days after the end of each semi-annual period. Each semi-annual report shall include the dates included in the semi-annual period. With regard to visible emissions and opacity monitoring, the permittee shall report all excess opacity and the percentage of operating hours for which opacity monitoring data have not been obtained. If no excess opacity occurred or opacity monitoring data were obtained for all operating hours during the reporting period, the semi-annual report shall contain a statement as such. All semi-annual opacity monitoring reports shall conform to the Opacity Monitoring Report Format enclosed with this permit.
(9 VAC 5-80-110 of State Regulations)

297. The permittee shall report the results of any 40 CFR Part 60 method 9 opacity test performed as a result of Condition #294. If the test indicates the facility is out of compliance with the standard contained in Condition #290, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E.
(9 VAC 5-80-110 of State Regulations)

298. The permittee shall report the results of any Condition #291.c calculation which indicates a value greater than the SO2 standard of Condition #289. In accordance with Condition #291.d, the permittee shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E.
(9 VAC 5-80-110 of State Regulations)

U. Honeywell Chemicals Area Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Control Equipment Requirements

Note: In sections XII.A through XII.G, the Trane Thermal Incinerator (FU-14) is treated as a VOC air pollution control device. In section XII.H, the unit is treated as a hazardous waste combustor and an affected source under 40 CFR 63, Subpart EEE.

299. Volatile organic compound emissions from the equipment specified below shall be controlled by the Honeywell Chemicals Plant Trane Thermal Incinerator (FU-14):

TW-70, TW-72, TW-73, TW-75, TW-76, CL-55, CL-66, VT-614, APT-117, APT-119, APT-120, APT-126, CL-54 (C-311), HA-112, HA-113, HT-258, HT-240, SE-130, VT-615, VT-617, VT-618, VT-621, VT-851, VT-852, VT-856, HT-187, SE-301/SE-302, C-516/C-517, VT-953, HT-New, the Honeywell Chemicals multi-purpose oximation process and tanker trucks and/or railcars used for storage of Methyl Isobutyl Ketone.

The incinerator shall have a minimum VOC destruction efficiency of 99.99%. The incinerator shall be maintained at a minimum temperature of 980 degrees Celsius. The incinerator shall be provided with adequate access for inspection.

Sulfur dioxide and particulate emissions from FU-14 shall be controlled by an adiabatic quench tower (TW-64) in series with a caustic scrubber (TW-48) in series with a cloud chamber wet scrubber system

(TW-95, TW-96). TW-64, TW-48 and TW-95/96 shall be provided with adequate access for inspection. The permittee shall operate FU-14, TW-64, TW-48 and TW-95/96 in a manner such that all applicable requirements of 40 CFR 63, Subpart EEE and all emission limits of Condition #312 are met.
(Condition #3 of the 3/09/2006 NSR Permit, 9 VAC 5-40-3430 A, 9 VAC 5-40-3440 A and 9 VAC 5-80-110 of State Regulations)

300. Volatile organic compound emissions from fugitive equipment leaks from the Honeywell Chemicals OS-1000 manufacturing process and the Honeywell Chemicals Multi-Purpose Oximation process shall be controlled by a Leak Detection and Repair (LDAR) Program.
(Condition #4 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

301. Fugitive VOC emissions resulting from equipment leaks in those portions of Area 14 not already subject to fugitive emissions requirements from other applicable regulations shall be controlled through a Leak Detection and Repair (LDAR) program. The LDAR program shall be substantively equivalent to the LDAR requirements specified in 40 CFR 60, Subpart VV.
(Condition #E.7 of the 3/26/1997 RACT Agreement and 9 VAC 5-80-110 of State Regulations)

302. Volatile organic compound emissions from storage tanks VT-215 and VT-217 and MEKO distillation columns CI-23 and CI-24 in the Area 14 manufacturing process shall be controlled by a packed tower scrubber (TW-74) operating with a Total Resource Effectiveness (TRE) value of greater than 1.0. The scrubber system shall operate at a pressure drop determined during the initial performance test. The scrubber shall be provided with adequate access for inspection.
(Condition #5 of the 3/09/2006 NSR Permit, Condition #E.5 of the 3/26/1997 RACT Agreement and 9 VAC 5-80-110 of State Regulations)

Throughput Limits

303. The combined annual production of crude and distilled Methyl Ethyl Ketoxime (MEKO) from the Area 14 MEKO manufacturing process and the Honeywell Chemicals MEKO manufacturing process shall not exceed 3,640 and 2,730 Area 14/Honeywell Chemicals production units, respectively, calculated as the sum of each consecutive 12 month period.
(Condition #7 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

304. The annual production of Methyl Ethyl Ketoxime (MEKO) from the Honeywell Chemicals multi-purpose oximation process shall not exceed 728 Area 14/Honeywell Chemicals production units, respectively, calculated as the sum of each consecutive 12 month period.
(Condition #8 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

305. The annual production of Methyl Isobutyl Ketoxime (MIBKO) from the Honeywell Chemicals multi-purpose oximation process shall not exceed 1,001 Area 14/Honeywell Chemicals production units, respectively, calculated as the sum of each consecutive 12 month period.
(Condition #9 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

306. The annual production of MOS/VOS from the Honeywell Chemicals OS-1000 manufacturing process shall not exceed 637 Area 14/Honeywell Chemicals production units, calculated as the sum of each consecutive 12 month period. The annual number of F-169 discharges from the Honeywell Chemicals OS-1000 manufacturing process shall not exceed 1,112, calculated as the sum of each consecutive 12 month period.
(Condition #10 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

307. The annual production of AAO from the Honeywell Chemicals multi-purpose oximation process shall

not exceed 1,110.2 Area 14/Honeywell Chemicals production units (as 100% AAO). Annual production shall be calculated as the sum of each consecutive 12 month period.
(Condition #11 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

308. The annual production of Methylthioisobutylaldehyde oxime from the Honeywell Chemicals ADO Manufacturing Process shall not exceed 926.8 Area 14/Honeywell Chemicals production units. Annual production shall be calculated as the sum of each consecutive 12 month period.
(Condition #12 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

309. The annual combustion of organic hazardous waste in the Trane Thermal Incinerator FU-14 shall not exceed 717.4 Area 14/Honeywell Chemicals production units. Annual combustion shall be calculated as the sum of each consecutive 12 month period.
(Condition #13 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

310. The annual feed of waste methyl mercaptan to the Trane Thermal Incinerator FU-14 shall not exceed 159.3 Area 14/Honeywell Chemicals production units. Annual feed shall be calculated as the sum of each consecutive 12 month period.
(Condition #14 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Emission Limitations

311. Emissions from the operation of the Area 14 Methyl Ethyl Ketoxime manufacturing process shall not exceed the limits specified below:

Volatile Organic Compounds	4.5 lbs/hr	2.3 tons/yr

Compliance shall be determined as stated in Condition #303.
(Condition #15 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

312. Emissions from the Honeywell Chemicals Plant Trane Thermal Incinerator shall not exceed the limits specified below:

Particulate Matter	0.015 gr/dscf	0.73 lbs/hr	3.2 tons/yr
PM10		0.73 lbs/hr	3.2 tons/yr
Sulfur Dioxide		10.0 lbs/hr	43.8 tons/yr
Nitrogen Oxides		25.0 lbs/hr	87.1 tons/yr
Volatile Organic Compounds		0.08 lbs/hr	0.35 tons/yr

(Condition #16 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

313. Emissions from the Honeywell Chemicals OS-1000 manufacturing process product container loading shall not exceed the limits specified below:

Volatile Organic Compounds	1.4 lbs/hr	0.5 tons/yr

Compliance shall be determined as stated in Condition #306.
(Condition #17 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

314. Emissions from the Ammonium Chloride Filter (F-169) shall not exceed the limits specified below:

Volatile Organic Compounds	12.0 lbs/hr	1.1 tons/yr

Compliance shall be determined as stated in Condition #306.
(Condition #18 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

315. Emissions from the Rain Water Sump (SU-8) shall not exceed the limits specified below:

Volatile Organic Compounds	1.0 lbs/hr	0.5 tons/yr

Compliance shall be determined as stated in Condition #308.
(Condition #19 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

316. Fugitive emissions from the pumps, valves and flanges at the Honeywell Chemicals OS-1000 manufacturing process shall not exceed the limits specified below:

Volatile Organic Compounds	3.2 lbs/hr	13.8 tons/yr

These emissions are derived from the estimated overall emission contribution and are included for emission inventory purposes. Compliance shall be determined as stated in Condition #306.
(Condition #20 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

317. Fugitive emissions from the pumps, valves and flanges at the Area 14 Methyl Ethyl Ketoxime manufacturing process shall not exceed the limits specified below:

Volatile Organic Compounds	1.8 lbs/hr	7.9 tons/yr

These emissions are derived from the estimated overall emission contribution and are included for emission inventory purposes. Compliance shall be determined as stated in Condition #303.
(Condition #21 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

318. Visible emissions from the Trane Thermal Incinerator (FU-14) shall not exceed 20 percent opacity, except for one six minute period in any one hour of not more than 30 percent opacity.
(Condition #22 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

319. Visible emissions from the MOS/VOS product container loading fan vent (FN-208) shall not exceed 5 percent opacity.
(Condition #23 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

MON Process Requirements

320. Unless an alternative date is approved by the Administrator, as of May 10, 2008, the permittee shall operate any applicable Area 14 equipment and any applicable Honeywell Chemicals Area equipment in compliance with the requirements of 40 CFR 63 Subparts A and FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing and Miscellaneous Coating Manufacturing).
(40 CFR 63, Subparts A and FFFF and 9 VAC 5-80-110 of State Regulations)

V. Honeywell Chemicals Monitoring, Recordkeeping and Reporting (Periodic Monitoring) – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

Monitoring

321. The Trane thermal incinerator (FU-14) shall be equipped with a temperature monitoring device to continuously monitor the temperature of the incineration chamber.
(Condition #3 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

322. The packed tower scrubber (TW-74) shall be equipped with a liquid flow meter and a device to continuously measure the differential pressure through the scrubber.
(Condition #5 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

323. Each emission unit subject to Conditions #318 or #319, including the Trane Thermal Incinerator (FU-14) and the MOS/VOS product container loading fan vent (FN-208), shall be observed visually at least once each operating week for at least a brief time period to determine which emissions units have normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110 of State Regulations)

Recordkeeping

324. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Region. These records shall include, but are not limited to:

a. The monthly production/throughput of MEKO from the Area 14 MEKO manufacturing process, the Honeywell Chemicals MEKO manufacturing process and the Honeywell Chemicals Multi-Purpose Oximation process.
b. The monthly production/throughput of MIBKO.
c. The monthly production/throughput of MOS/VOS and the monthly number of F-169 discharges.
d. The monthly production/throughput of Methylthioisobutylaldehyde oxime.
e. The monthly production/throughput of AAO.
f. The monthly feed of liquid and gaseous materials to FU-14 and the estimated sulfur content of these feed materials.
g. The monthly feed of waste methyl mercaptan to FU-14.
h. The Leak Detection and Repair records required by Conditions #300 and #301 as well as records which indicate the inspection frequency for equipment leaks in the Honeywell Chemicals OS-1000 manufacturing process and the Honeywell Chemicals Multi-Purpose Oximation process and, where leaks are detected, records which indicate the time required to repair the detected leak.
i. For TW-74, all daily periods of operation, calculated on a rolling average, in which the average pressure drop is more than 0.19 psig above the pressure drop determined during the initial performance test and an explanation provided for each such temperature excursion.
j. The results of the monthly visible emission surveys required by Condition #323 and details of any corrective action taken as a result of these inspections
k. A maintenance schedule for all process equipment including pumps, valves and flanges, and air pollution control equipment.

l. Scheduled and unscheduled maintenance records for all process equipment and air pollution control equipment.
m. Inventory of spare parts to minimize the duration of air pollution control equipment breakdowns.
n. Written operating procedures for all process equipment and air pollution control equipment.
o. Operator training records.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(Conditions #4, #5 and #25 of the 3/09/2006 NSR Permit, Condition #E.29 of the 3/26/1997 RACT Agreement and 9 VAC 5-80-110 of State Regulations)

Reporting

325. The permittee shall furnish written notification to the Director, Piedmont Regional Office of:

a. The actual date on which construction of MEKO Lites Column TW-75 commenced within 10 days after such date.

b. The actual start-up date of MEKO Lites Column TW-75 within 10 days after such date.
(Condition #24 of the 3/09/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

326. The permittee shall report the results of any 40 CFR Part 60 method 9 opacity test performed as a result of Condition #323. If the test indicates the facility is out of compliance with a standard contained in Conditions #318 or #319, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XVI, Condition E.
(9 VAC 5-80-110 of State Regulations)

W. MACT Subpart EEE Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

MACT Subpart EEE Emission Standards

327. **Emission Limits in effect prior to October 14, 2008** – Except for periods of startup, shutdown and malfunction, emissions from the Honeywell Chemicals Plant Trane Thermal Hazardous Waste Incinerator (FU-14) shall not exceed the limits specified below, corrected to 7 percent oxygen:

Dioxans/furans	0.40 ng TEQ/dscm
Mercury	130 ug/dscm
Semivolatile Metals (SVM)	240 ug/dscm
Low Volatility Metals (LVM)	97 ug/dscm
Total Chlorine (HCl/CL2)	77 ppmv (dry)
Particulate Matter	0.015 gr/dscf
Carbon Monoxide (CO)	100 ppmv (dry)

Hydrocarbons (HC)	10 ppmv (dry)
Principal Organic Hazardous Constituents (POHC)	99.99% DRE (Destruction and removal efficiency)

(40 CFR 63.1203(a)(1-7), 40 CFR 63.1203(c)(1) and 9 VAC 5-80-110)

328. **Emission Limits in effect on and after October 14, 2008** – Except for periods of startup, shutdown and malfunction, emissions from the Honeywell Chemicals Plant Trane Thermal Hazardous Waste Incinerator (FU-14) shall not exceed the limits specified below, corrected to 7 percent oxygen:

Dioxans/furans	0.40 ng TEQ/dscm
Mercury	130 ug/dscm
Semivolatile Metals (SVM)	230 ug/dscm
Low Volatility Metals (LVM)	92 ug/dscm
Total Chlorine (HCl/CL2)	32 ppmv (dry)
Particulate Matter	0.013 gr/dscf
Carbon Monoxide (CO)	100 ppmv (dry)
Hydrocarbons (HC)	10 ppmv (dry)
Principal Organic Hazardous Constituents (POHC)	99.99% DRE (Destruction and removal efficiency)

(40 CFR 63.1219(a)(1-7), 40 CFR 63.1219(c)(1) and 9 VAC 5-80-110)

329. **Fugitive Emission Control** - The permittee shall control FU-14 combustion system leaks of HAP by keeping the combustion zone sealed. The FU-14 combustion zone seals shall be inspected each operating day to ensure their integrity. The inspections and their results shall be recorded in the FU-14 operating plan.
(40 CFR 63.1206(c)(5) and 9 VAC 5-80-110 of State Regulations)

MACT Subpart EEE Monitoring

330. **CO/O_2 CEMS** - Continuous emission monitoring systems (CEMS) for carbon monoxide (CO) and oxygen (O2) shall be installed on the FU-14 exhaust stack. The CO and O_2 CEMS shall be installed, calibrated, maintained, and continuously operated in compliance with 40 CFR 63 Subpart EEE, Appendix 1 and Performance Specification 4B of 40 CFR 60 Appendix B. Data from the CEMS shall be used to determine compliance with the CO and hydrocarbon emission standards of Conditions #324 and #325. The CEMS data shall be used to calculate hourly rolling averages as specified in 40 CFR 63.1209(a)(6).
(40 CFR 63.1209(a) and VAC 5-80-110 of State Regulations)

331. **PM CEMS** - A continuous emission monitoring system (CEMS) for particulate matter (PM) shall be installed on the FU-14 exhaust stack. The PM CEMS shall be installed, calibrated, maintained, and continuously operated in compliance with the applicable performance specifications and operational requirements.

However, compliance with condition shall not be required until such time as the United States Environmental Protection Agency promulgates all such performance specifications and operational requirements. Data from the CEMS shall be used to determine compliance with the PM emission standard of Conditions #324 and #325.
(40 CFR 63.1209(a)(iii) and VAC 5-80-110 of State Regulations)

332. **Operating Parameter Limits and CMS** – Honeywell shall install, operate and maintain continuous monitoring systems (CMS) for the hazardous waste incinerator (FU-14) operating parameters listed in Column 1 below. Honeywell shall install, operate, calibrate and maintain the CMS in accordance with 40 CFR 63.1209(b)(2), 40 CFR 63.1209(f) and 40 CFR 63.8(c)(3). Each CMS shall sample the regulated parameter without interruption, and evaluate the detector response at least once each 15 seconds, and compute and record the average values at least every 60 seconds. Until or unless the permittee submits a new (after the date of this permit) Document of Compliance or Notification of Compliance, the permittee shall operate the hazardous waste incinerator (FU-14) such that the operating parameters in Column 1 comply with the respective operating parameter limits in Column 2 over the averaging periods specified in Column 3.

Column 1	Column 2	Column 3
Minimum combustion chamber Temperature	1013°C	HRA*
Maximum Total Hazardous Waste Feed Rate	2,807 lb/hr	HRA*
Maximum Flue gas flow rate	36 feet/sec	HRA*
Maximum Ash Feed Rate	1.8 lb/hr	12-hr RA*
Maximum Total Chlorine Feed Rate	334 lb/hr	12-hr RA*
Maximum Process Chlorine Feed Rate	1,052 lb/hr	12-hr RA*
Mercury maximum theoretical Emission concentration	130 ug/dscm	12-hr RA*
SVM maximum theoretical Emission Concentration	240 ug/dscm	12-hr RA*
Maximum Low Volatility Metals Feed Rate	0.017 lb/hr	12-hr RA*
Minimum Caustic Scrubber Tower (TW-48) liquid to gas ratio	14 gal/10^3 ft^3	HRA*
Minimum Caustic Scrubber Tower (TW-48) pressure drop	2.0 inches w.c.	HRA*
Minimum Caustic Scrubber Tower (TW-48) liquid ph	7.5	HRA*

Maximum Caustic Scrubber Tower (TW-48) liquid density	1.04 g/cm3	HRA*
Minimum Cloud Chamber Scrubber (TW-95) PCM Voltage	9.4 kV	HRA*
Minimum Cloud Chamber Scrubber (TW-96) PCM Voltage	8.2 kV	HRA*
Minimum Cloud Chamber Scrubber Circulation Rate	504 gal/min	HRA*
Burner Flame Status	Flame On	15-seconds

Note: *HRA refers to hourly rolling average. 12-hr RA refers to twelve-hour rolling average.
(40 CFR 63.1203(a)(1-7), 40 CFR 63.1203(c)(1) and 9 VAC 5-80-110)

333. **CMS/CEMS Performance** - In accordance with 40 CFR 63.8(d)(2), the permittee shall prepare and implement a CMS performance evaluation plan to implement the CMS Quality Control Program and specify how to maintain calibration of the CMS and minimize CMS malfunctions. In addition, the CMS performance evaluation plan shall include the CEMS Quality Assurance/Quality Control program required by 40 CFR 63 Subpart EEE, Appendix A
(40 CFR 63.1209(d), 40 CFR 63.8(d), 40 CFR 63 Subpart EEE – Appendix A and 9 VAC 5-80-110 of State Regulations)

MACT Subpart EEE Operating Plans/Requirements

334. **SSM Plan** - The permittee shall develop and implement a written start-up, shutdown and malfunction (SSM) plan as specified in 40 CFR 63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the hazardous waste incinerator (FU-14) during periods of SSM and a program for corrective action for malfunctioning process and air pollution control equipment used to comply with 40 CFR 63 Subpart EEE.

a. The SSM plan shall identify a projected oxygen correction factor based on normal operations to use during periods of startup and shutdown.
b. The SSM plan shall be recorded in the operating record.
c. The SSM plan shall be revised as necessary in accordance with the “excessive exceedences during malfunctions” requirements of 40 CFR 63.1206(c)(2)(v)(A)(3).
d. The SSM plan shall include any applicable requirements of 40 CFR 63.1206(c)(2)(v)(B).

(40 CFR 63.6(e)(3), 40 CFR 63.1206(c)(2) and 9 VAC 5-80-110 of State Regulations)

335. **AWFCO System** - The permittee shall operate FU-14 with a functioning automatic waste feed cutoff (AWFCO) system that immediately and automatically cuts off the hazardous waste feed when any of the following occur:

a. The exceedence of an operating parameter limit specified in Condition #332;
b. The exceedence of an emission standard measured by a CEMS;
c. The exceedence/meeting of a span value of any CMS detector; except a CEMS;
d. The malfunction of a CMS monitoring an operating parameter limit specified in Condition #332 or an emission level;

e. The failure of any component of the AWFCO system;

The AWFCO system and associated alarms shall be tested at least weekly to verify operability, unless you document in the operating record that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, the permittee shall conduct operability testing at least monthly. These AWFCO operability test procedures and results shall be documented and recorded in the FU-14 operating record. The AWFCO system shall also be designed and operated in compliance with the requirements of 40 CFR 63.1206(c)(3)(ii) – Ducting of combustion gases, 40 CFR 63.1206(c)(3)(iii) – Restarting of waste feed, 40 CFR 63.1206(c)(3)(v) – Corrective measures, 40 CFR 63.1206(c)(3)(vi) – Excessive exceedence reporting and 40 CFR 63.1206(c)(3)(viii) – Ramping down waste feed; as applicable.
(40 CFR 63.1206(c)(3) and 9 VAC 5-80-110 of State Regulations)

336. **O&M Plan** - The permittee shall develop and operate at all times according to the Operation and Maintenance Plan required by 40 CFR 63.1206(c)(7). This plan shall include detailed procedures for operation, maintenance and corrective measures for all components of the hazardous waste incinerator (FU-14) that could affect the emissions of regulated HAP. The plan shall prescribe how the permittee will operate and maintain FU-14 in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test. The plan shall be recorded in the operating record.
(40 CFR 63.1206(c)(7) and 9 VAC 5-80-110 of State Regulations)

337. **OTC Program** - In accordance with 40 CFR 63.1206(c)(6), the permittee shall develop and implement an operator training and certification (OTC) program. The OTC program shall be designed to provide training to all personnel whose activities may reasonably be expected to directly affect emission of HAP from FU-14. FU-14 control room operators shall be trained and certified in accordance with 40 CFR 63.1206(c)(6)(iii-vi). One certified control room operator shall be on duty at the site at all times FU-14 is in operation. The OTC program shall be recorded in the FU-14 operating record.
(40 CFR 63.8(c)(6) and 9 VAC 5-80-110 of State Regulations)

338. **HWRT** - In accordance with 40 CFR 63.1206(b)(11), the permittee shall calculate the hazardous waste residence time and include the calculation in the operating record.
(40 CFR 63.1206(b)(11) and 9 VAC 5-80-110 of State Regulations)

339. **Feedstream Analysis Plan** - In accordance with 40 CFR 63.1209(c)(2), the permittee shall develop and implement a feedstream analysis plan (FAP). The plan shall be recorded in the FU-14 operating record and include:

a. The parameters for which each feedstream will be analyzed to ensure compliance with operating parameter limits (OPL).
b. The method that will be used to obtain the analysis.
c. The methods used to document compliance wit the applicable federate OPLs.
d. The analytical methods that will be used.
e. The sampling methods that will be used.
f. The frequency of sampling and analysis.

(40 CFR 63.1209(c)(2) and 9 VAC 5-80-110 of State Regulations)

MACT Subpart EEE Performance Testing

340. **Comprehensive Performance Tests** - The permittee shall conduct comprehensive performance tests to demonstrate compliance with the emission standards provided by this subpart, establish limits for the

operating parameters provided by 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems.

a. The permittee shall conduct an initial comprehensive performance test to demonstrate compliance with the emission limits in Condition #325 not later than 12 months after October 14, 2008 (unless otherwise specified by the Administrator).
b. The permittee shall commence periodic comprehensive performance testing no later than 61 months after the date of commencing the previous comprehensive performance test. If the permitee submits data in lieu of the initial performance test, the subsequent comprehensive performance test shall be commenced within 61 months of commencing the test used to provide the data in lieu of the initial performance test.
c. Unless otherwise approved, the permittee shall complete performance testing within 60 days after the date of commencement.
d. The permittee shall submit a notification of the intention to conduct a comprehensive performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least one year before the performance test and performance evaluation are scheduled to begin.
e. For each test plan, the permittee shall comply with the public notice requirements of 40 CFR 63.1207(e)(2).
f. Each comprehensive performance test plan shall include the information required by 40 CFR 63.1207(f)(1).
g. During each comprehensive performance test, FU-14 shall be operated as specified in 40 CFR 63.1207(g)(1).
h. Except as provided by 40 CFR 63.1207(j)(4) or (j)(5), within 90 days of completion of a comprehensive performance test, the permitee shall postmark a Notification of Compliance documenting compliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under 40 CFR 63.1209.
i. Unless otherwise specified, the permittee shall conduct each performance test in accordance with all applicable provisions of 40 CFR 63.7.

(40 CFR 63.1207 and 9 VAC 5-80-110 of State Regulations)

341. **Confirmatory Performance Tests** - The permittee shall conduct confirmatory performance tests to demonstrate compliance with the dioxin/furan emission standard when the source operates under normal operating conditions and conduct a performance evaluation of continuous monitoring systems required for compliance assurance with the dioxin/furan emission standard under 40 CFR 63.1209(k).

a. The permittee shall commence periodic confirmatory performance testing no later than 31 months after the date of commencing the previous comprehensive performance test. To ensure that the confirmatory test is conducted approximately midway between comprehensive performance tests, the permittee shall not schedule confirmatory performance testing within 18 months of commencing the previous comprehensive performance test.
b. Unless otherwise approved, the permittee shall complete performance testing within 60 days after the date of commencement.
c. The permittee shall submit a notification of the intention to conduct a confirmatory performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least 60 calendar days before the performance test is scheduled to begin.
d. For each test plan, the permittee shall comply with the public notice requirements of 40 CFR 63.1207(e)(2).
e. Each confirmatory performance test plan shall include the information required by 40 CFR 63.1207(f)(2).
f. During each confirmatory performance test, FU-14 shall be operated as specified in 40 CFR

63.1207(g)(2).

g. Except as provided by 40 CFR 63.1207(j)(4), within 90 days of completion of a confirmatory performance test, the permitee shall postmark a Notification of Compliance documenting compliance or noncompliance with the applicable dioxin/furan emission standard.

h. Unless otherwise specified, the permittee shall conduct each performance test in accordance with all applicable provisions of 40 CFR 63.7.

(40 CFR 63.1207 and 9 VAC 5-80-110 of State Regulations)

MACT Subpart EEE Reporting

342. **Notifications** - The permittee shall submit the following notifications to demonstrate compliance with this permit. The content of and format of such notifications shall be arranged with the Director, Piedmont Region. These notifications shall include, but are not limited to:

a. Notification of Performance Test and CMS Evaluation as specified in Conditions #337.d and #338.c of this permit.

b. Notification of Intent to Comply (NIC) containing the information specified in 40 CFR 63.1210(b) and 63.1212 and the public notice requirements of 40 CFR 63.1210(c). The final NIC shall be submitted no later than October 14, 2006.

c. Notification of Compliance (NOC) containing the information specified in 40 CFR 63.9(h) and 40 CFR 63.1207(j). The permittee shall submit a NOC for each performance test required by Conditions #337 or #338. Each NOC shall be postmarked before the close of business on the 90th day following completion of the relevant performance test.

(40 CFR 63.1209(a)(iii) and VAC 5-80-110 of State Regulations)

343. **Reports** - The permittee shall submit the following reports to demonstrate compliance with this permit. The content of and format of such reports shall be arranged with the Director, Piedmont Region. These reports shall include, but are not limited to:

a. Periodic Start-up, Shutdown and Malfunction Reports containing the information specified in 40 CFR 63.10(d)(5)(i). These reports shall be submitted if actions taken by the permittee during a startup, shutdown, or malfunction of FU-14 (including actions taken to correct a malfunction) are consistent with the procedures specified in the SSM plan. Such a report shall identify any instance where any action taken by the permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the SSM plan, but the FU-14 does not exceed any emission limitation in Conditions #324 or #325 of this permit. The SSM report shall be delivered or postmarked by the 30th day following the end of each calendar half.

b. Immediate Start-up, Shutdown and Malfunction Reports containing the information specified in 40 CFR 63.10(d)(5)(ii) and the actions taken for the event. These reports shall be submitted if a SSM event occurs during the reporting period that is not consistent with the SSM plan and FU-14 exceeds any emission standard included in Conditions #324 or #325 of this permit. The permittee shall submit the report within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event.

c. Excessive Emissions and CEMS Performance Reports containing the information specified in 40 CFR 63.10(e)(3). The excessive emissions and CEMS performance report shall be delivered or postmarked by the 30th day following the end of each calendar half.

d. Excessive Exceedence Reports - For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (*i.e.*, when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, the permittee shall submit a written report within 5 calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken.

(40 CFR 63.1211(a) and VAC 5-80-110 of State Regulations)

MACT Subpart EEE Recordkeeping

344. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Region. These records shall be retained in the FU-14 operating record and shall include, but are not limited to:

a. Information required to document and maintain compliance with 40 CFR 63 Subpart EEE, including data recorded by CEMS and CMS and copies of all notifications, reports, plans and other documents submitted in accordance with Subpart EEE;
b. Calculation of the hazardous waste residence time
c. SSM plan;
d. Documentation of any investigations and evaluation of excessive exceedences during malfunctions;
e. Corrective measures for any AWFCO that results in an exceedence of an emission standard or operating parameter limit;
f. Documentation and results of the AWFCO operability testing;
g. Documentation and results of combustion chamber seal inspections;
h. OTC program;
i. Operation and maintenance plan;
j. Feedstream analysis plan; and
k. Documentation of Compliance (DOC) - By October 14, 2008, the permittee shall develop and include in the FU-14 operating record a DOC. Upon inclusion of the DOC in the operating record, FU-14 shall no longer be subject to compliance with the previously applicable NOC. The DOC shall include the information required by 40 CFR 63.1211(c)(2-3). The permittee shall comply with all emission standards and operating parameter limits specified in the DOC.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(40 CFR 63.1211(b) and VAC 5-80-110 of State Regulations)

MACT Subpart EEE General Requirement

345. **General MACT Subpart EEE** - Except where this permit is more restrictive than the applicable requirement, the permittee shall operate FU-14 in compliance with all requirements of 40 CFR 63 Subparts A and EEE. (40 CFR 63, Subparts A and EEE and 9 VAC 5-80-110 of State Regulations)

X. Facility-Wide Applicable Requirements – the source of the requirement appears in parentheses after the requirement (along with the Title V regulatory reference)

NOx Emission Cap Requirements

346. Beginning on June 1, 2000, the total NOx emissions from this facility shall not exceed 13,085 tons per year,

calculated monthly as the sum of each previous consecutive 12 month period. The first consecutive 12 month period shall be the twelve months after June 1, 2000.
(Condition #17 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

347. Beginning on June 1, 2000, the total NOx emissions from this facility during the time period beginning June 1 and ending September 1 of each calendar year shall not exceed 3,382 tons. These emissions totals shall be accumulated through this time period and shall be reported to the Piedmont Regional Office by November 15 of each calendar year.
(Condition #18 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Air Pollution Control Equipment Requirements

348. The permittee shall operate all control equipment in a manner consistent with good air pollution control practice such that the facility shall remain in compliance with this permit and all applicable portions of the State Air Pollution Control Board's Regulations for the Control and Abatement of Air Pollution. All control equipment shall be provided with adequate access for inspection.
(9 VAC 5-80-110 of State Regulations)

Operating Practice Requirements

349. In order to minimize the duration and frequency of excess emissions due to malfunctions of process equipment or air pollution control equipment, the permittee shall:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance. These records shall be maintained on site for a period of five (5) years and shall be made available to DEQ personnel upon request.

b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

(Condition #10 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

350. The permittee shall have available written operating procedures for the related air pollution control equipment. Operators shall be trained in the proper operation of all such equipment and shall be familiar with the written operating procedures. These procedures shall be based on the manufacturer's recommendations, at minimum. The permittee shall maintain records of training provided including names of trainees, date of training and nature of training.
(Condition #11 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

40 CFR 61 Subpart FF (Benzene NESHAP) Requirements

The requirements of the Benzene NESHAP were included in the facility-wide section since they do not apply to any specific operating division of the facility.

351. The permittee shall comply with the recordkeeping requirements of 40 CFR 61.356 and the reporting requirements of 40 CFR 61.357; and repeat the determination of total annual benzene quantity from facility waste whenever there is a change in the processes generating the waste that could cause the total annual benzene quantity from facility waste to increase to 1 Mg/yr (1.1 ton/yr) or more.
(40 CFR 61.355(a)(5) and 9 VAC 5-80-110 of State Regulations)

Recordkeeping Requirements

352. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include but are not limited to:

a. All production and analytical data necessary to show compliance with the removal efficiencies defined and described in conditions categorized as **Control Equipment Requirements** in this permit.

b. All production data necessary to show compliance with the throughput limits defined and described in conditions categorized as **Throughput Limits** in this permit.

c. All production and analytical data necessary to show compliance with the emissions limits defined and described in conditions categorized as **Emissions Limits** in this permit.

d. Copies of the results of all initial performance tests conducted consistent with the requirements of this permit and the appropriate technical and regulatory methodology defined in 40 Code of Federal Regulations Part 60 and the associated appendices.

e. Results of Method 9 testing performed to determine opacity in conjunction with initial performance testing and any additional testing consistent with the requirements of this permit.

f. Records that identify each waste stream at the facility subject to 40 CFR 61 Subpart FF, and indicate whether or not the waste stream is controlled for benzene emissions in accordance with Subpart FF.

g. For each waste stream not controlled for benzene emissions in accordance with 40 CFR 61 Subpart FF, records of all test results, measurements, calculations, and other documentation used to determine the following information for the waste stream: waste stream identification, water content, whether or not the waste stream is a process wastewater stream, annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(40 CFR 61.356(b), Condition #6 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

353. The permittee shall maintain production records sufficient to indicate the rated production capacities of the equipment described in the **Existing Equipment** section of Condition #2 of the August 9, 2006 NSR permit. These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(Condition #5 of the 8/9/2006 NSR Permit and 9 VAC 5-80-110 of State Regulations)

Reporting

354. The permittee shall submit to the Director, Piedmont Regional Office a report that updates the information listed in 40 CFR 61.357(a)(1-3) whenever there is a change in a process generating a waste stream that could cause the total annual benzene quantity from facility waste to increase to 1 Mg/yr (1.1 ton/yr) or more. Copies of reports required by condition are to be sent to:

Office of Air Enforcement (3AP10)
U. S. Environmental Protection Agency

Region III

1650 Arch Street
Philadelphia, PA 19103-2029

(40 CFR 61.357(b) and 9 VAC 5-80-110 of State Regulations)

Testing

355. The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30 F and 9 VAC 5-80-110 of State Regulations)

356. If compliance testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows.

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Methods 5, 17
VOC/HAP	EPA Methods 25A, 18, 320
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

STREAMLINED REQUIREMENTS

No streamlined requirements have been identified.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by 2.1-20.01:2 and ∋10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

This general conditions cites the entire Article(s) that follow:
B.2. Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Permits for Stationary Sources
B.3. Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Permits for Stationary Sources

This general condition cites the sections that follow:
B. 9 VAC 5-80-80. "Application"
B.2. 9 VAC 5-80-150. "Action on Permit Applications"
B.3. 9 VAC 5-80-80. "Application"

B.4. 9 VAC 5-80-80. "Application"
B.4. 9 VAC 5-80-140. "Permit Shield"
B.5. 9 VAC 5-80-80. "Application"

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excesses emissions reporting within 4 hours. Section 9 VAC 5-80-250 also requires malfunction reporting; however, reporting is required within 2 days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to this section including Title 5 facilities. Section 9 VAC 5-80-250 is from the Title 5 regulations. Title 5 facilities are subject to both Sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within 4 day time business hours of the malfunction.

Please note there are proposed regulation changes that could affect this condition. The requirement listed in section 9 VAC 5-20-180 to report excesses emissions within 4 business hours may be changed to require reporting of excess emissions within 6 hours.

This general condition cites the sections that follow:

F. 9 VAC 5-40-50. Notification, Records and Reporting
F. 9 VAC 5-50-50. Notification, Records and Reporting

U. Failure/Malfunction Reporting

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in section 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

U.2.d. 9 VAC 5-80-110. Permit Content
U.2.d. 9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

STATE ONLY APPLICABLE REQUIREMENTS

None identified

FUTURE APPLICABLE REQUIREMENTS

None identified.

INAPPLICABLE REQUIREMENTS

No inapplicable requirements identified.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, record keeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110. The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-	Rated Capacity (9 VAC 5-80-720 C)

			80-720 B)	
VT-031 VT-033 VT-099 VT-102 VT-151 VT-230 VT-252 VT-257 VT-333 VT-364 VT-401 VT-522 VT-771 VT-795 VT-796 VT-797	Miscellaneous Area 11 Storage Tanks	9 VAC 5-80-720 B	VOC	
TW-07	Carbonate Tower	9 VAC 5-80-720 B	VOC	
TW-11	Carbonate Tower	9 VAC 5-80-720 B	VOC	
TW-16	Carbonate Tower	9 VAC 5-80-720 B	VOC	
TW-21	Carbonate Tower	9 VAC 5-80-720 B	VOC	
TW-31	Carbonate Tower	9 VAC 5-80-720 B	VOC	
HE-221	North American 6514-8-A natural gas-fired steam superheater	9 VAC 5-80-720 C		4.24 MMBtu/hr
HE-305	North American 6514-8-A natural gas-fired steam superheater	9 VAC 5-80-720 C		4.24 MMBtu/hr
PW-8	(2) Safe-T-Kleen parts washers	9 VAC 5-80-720 B	VOC	
PW-9	(3) Safe-T-Kleen parts washers	9 VAC 5-80-720 B	VOC	
PW-17	(2) Safe-T-Kleen parts washers	9 VAC 5-80-720 B	VOC	
PW-26	(4) Safe-T-Kleen parts washers	9 VAC 5-80-720 B	VOC	
PW-77	(4) Safe-T-Kleen parts washers	9 VAC 5-80-720 B	VOC	
FP-1	Building 35 diesel fire pump #1	9 VAC 5-80-720 C		180 HP
FP-2	Building 35 diesel fire pump #2	9 VAC 5-80-720 C		340 HP
FP-3	Area 6 diesel fire pump	9 VAC 5-80-720 C		170 HP
FP-4	Kellogg diesel fire pump	9 VAC 5-80-720 C		194 HP
GEN-1	North side portable gasoline powered generator	9 VAC 5-80-720 C		15 HP

GEN-2	Kellogg UPS diesel engine (emergency)	9 VAC 5-80-720 C		40 HP
GEN-3	South side diesel emergency generator	9 VAC 5-80-720 C		277 HP
GEN-4	Diesel generator for emergency wet well pumps	9 VAC 5-80-720 C		600 HP
DAC-1	South maintenance diesel air compressor	9 VAC 5-80-720 C		60 HP
DAC-2	South maintenance diesel air compressor	9 VAC 5-80-720 C		144 HP
MH-1	Marine operations portable diesel-fired heater	9 VAC 5-80-720 C		0.15 MMBtu/hr
MH-2	Marine operations portable diesel-fired heater	9 VAC 5-80-720 C		0.15 MMBtu/hr
MH-3	Marine operations portable diesel-fired heater	9 VAC 5-80-720 C		0.15 MMBtu/hr
PB-1	South Maintenance paint fume hood	9 VAC 5-80-720 B	VOC	
RAC-1	Rental air compressors	9 VAC 5-80-720	PM,SO2,NOx,CO, VOC	

CONFIDENTIAL INFORMATION

The permittee did submit confidential and non-confidential versions of their Title V application. Additionally, in accordance with DEQ's 2003 Confidentiality Policy, Honeywell submitted a detailed showing for their confidential information claims. The DEQ approved the source's confidential showing. This showing included the use of certain surrogate parameters in lieu of confidential information such as maximum rated capacity and throughput limits. The relationship between the surrogate parameters and the confidential information is detailed in the confidential "key" document provided by Honeywell with their showing. Therefore, there is only one version of the Title V permit (and Statement of Basis), and it does NOT contain any confidential information. The "key" will be the only permit-related document filed as confidential.

PUBLIC PARTICIPATION

The draft permit went to public notice in the Richmond Times-Dispatch on August 18, 2006. The 30-day comment period specified in the public notice is scheduled to end on September 17, 2006.